ASL

Australian Society for Limnology Inc.

NEWSLETTER

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AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology (ASL) is an Australian-based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters.

Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians. The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

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Material for publication in the Volume 42 #3 newsletter (September Issue) are due on Friday 27 August 2004, and Volume 42 #4 (December Issue) contributions are due on Friday 26 November 2004.

All articles should be forwarded, if possible, as unformatted text on a disk or via email.

ASL Home Page - http://www.asl.org.au/

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Membership Information and contact details of the Regional Executive Members can be found at the back of this Newsletter.

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FROM ME

Late as usual.

From the last edition of the newsletter competition, the winning caption for the of the ASL and NZLS presidents....

"Someone's given me the wrong lyrics - this isn't the song we're supposed to be singing!"

Congratulations Simon Josey. Suitable prize winging its way to you.

As Newsletter Editor, one receives some strange requests at times:

> Hi Rhonda,
>
> I'm hoping you could help me locate a ASL newsletter, it newsletter 6, 11-13 (1968)
>
> The title of the work is:
>
> "Spawning areas of the Macquarie perch (Macquaria australasica) above the Eildon lake (Victoria) by J.C. Wharton
>
> Thankyou
>
> Phillip Rowan pcrow@deakin.edu.au

Anyway, thanks to Richard Marchant we tracked it down. Pays to keep impeccable records doesn't it!

Until we meet again.

Cheers
Rhonda

PRESIDENT'S REPORT

Greetings everyone,

The Adelaide Congress contingent have been busy organizing for the annual congress in November and it is shaping up to be an exciting one with some enjoyable fieldtrips planned and a chance to savour South Australia's particular delights! So I encourage you to start making your plans for this one. Read elsewhere in the newsletter for more details of the congress. Remember to encouraging any students to attend – calls for financial assistance to help them come to the congress will be made soon. And I understand there is another welcoming mixer for students attending the congress this year – again, with an aquatic theme...

Other exciting news is that the ASL database is now online (for ASL members only). This online database allows ASL members to keep their details (phone number, address, email, etc) up-to-date and to search the ASL member database for members with similar interests, members in their area, or members with expertise in a particular area. It also allows you to readily acquire the latest password to access the online ASL newsletter and executive minutes and find out when your membership fees are due. More information on the database is in Webmasters Report.

We shall be taking nominations for the ASL Medal and the ASL Early Career Excellence Award until **Tuesday 31 August 2004,** so please take some time to recognize some of the great achievers, especially the early career limnologists who you feel have contributed substantially to Australian limnology and/or aquatic ecosystem management. If you know of someone who you think is suitably deserving, check out the website or contact me for more details, and put together a nomination to reach me. See call for nominations and relevant regulations in this edition of the newsletter (pages 14 to 19).

Finally, the annual FASTS event "Science meets Parliament" (SmP) is on again but this election year it is earlier: **10-11th August**. As ever, ASL hopes to be well-represented and we have set aside some funds from our budget to help support attendance by ASL members to this event. If you would like to represent ASL at SmP but would need some financial assistance, please email me an Expression of Interest by Friday 2nd July. Outline the issues you wish to raise, make a short case as to how your involvement would serve Australian limnology, and give an estimate of the financial support you seek. I don't yet know the registration cost (last year it was $198 or, for a postdoc/student, $99 at 'early bird rates') but as soon as this becomes available on the website, I shall put around an email. At this stage, I envisage we would be able to at least pay early bird registration. Discussions with FASTS and the Executive have also emphasised that we want to encourage younger members to attend.

So lots going on and lots to look forward to...

Andrew Boulton

FROM THE WEBMASTER

The ASL database is now online! (for ASL members only)

This will allow ASL members to:

- Keep their details (phone number, address, email, etc.) up-to-date.
- Easily acquire the latest password to access the online ASL newsletter and executive minutes.
- Search the ASL member database for members with similar interests, members in their area, or members with expertise in a particular area.
- Customise what details they would be happy for other members to see or search on.
- Find out when their membership fees are due.

If you have an email address which is currently on our system, you will have been emailed a username and password. If you have not received your password by now, please contact the ASL membership officer, Margaret Hart. You do not need an email address to use this facility, but it will help the whole process run more smoothly. Please ensure that your email address, along with all your contact and address details are kept up-to-date in this database.

If you lose or misplace your password, don't fret! You can retrieve it by following the link below. Then at the login screen, just click "retrieve password", enter your email address - as long as that email address can be traced to an ASL member through the database, your password will then be emailed to you - keep in a safe place!! Your login name is the first letter of your first name, followed by your surname (e.g. for me it would be sjosey). If you keep the email with the password, you can just copy and paste it rather than typing it out (but be aware that the password will remain on the clipboard until you copy and paste something else). Once you have logged in, you will be presented by your details, with check boxes to the right of each item. By selecting an item, you are making it visible to other ASL members if they want to do a search on other members - so select as many of these items are you are comfortable with. In future, we may adjust this slightly to a compulsory selection of name, postcode and state, but for now, what you select is what others see.

Set your preferences for the delivery of the ASL newsletter on this screen as well. If you select anything other than it being posted, you may be eligible for a discount on member fees. To do a search for other ASL members, select "members" at the top right of the screen. You can then filter the ASL members listed (those chosing to be listed) by preferred field - e.g. you can chose the field 'interests' and put 'fish' and it will list only ASL members who have an interest in this area (and have chosen this field to be visible). The password for the online ASL newsletter and ASL executive minutes is available on this screen as well (top right), and will be changed from time to time - so you can get the latest password here. If you have any problems, suggests, or feedback, please let me know - preferably by email. I can also be contacted if you are having any technical difficulties with the database. To access the online database, visit http://www.asl.org.au/members/

Simon Josey, ASL webmaster; Email: webmaster@asl.org.au ; ph: (02) 6270 7665

43rd Annual ASL Congress
University of Adelaide
29 November to 3 December 2004

The ASL Congress will be held from 29th November - 3rd December 2004 on the campus of The University of Adelaide, South Australia. This is a Monday to Friday format, with papers on Tuesday-Friday. The University of Adelaide is located in a leafy setting and lies beside the River Torrens in the centre of Adelaide city, and is a central and easily accessible location. Another appropriate aspect of the venue is that the University of Adelaide has long been a centre of teaching and research for Limnology.

For lovers of Cricket, we suggest an earlier arrival as there is an Australia v New Zealand Test at Adelaide Oval, on the 26 - 30 November.

Registrations will open on the ASL website by 23rd June: www.asl.org.au

ASL subscribers will receive a paper copy of the registration form with their annual subscription notice. We would prefer delegates to use the web registration wherever possible. **Early registration and abstracts will be due by 1 September.**

REGISTRATION FEES:

Member Registration - **due by 1 September**	$230
Student member Registration - **due by 1 September**	$160
Non-member Registration - **due by 1 September**	$280
Single day Registration - **due by 1 November**	$110
Late Registration - **due by 1 November**	$330

Registration includes a registration pack and book of abstracts, all morning and afternoon teas, lunches on three days, the registration mixer and BBQ. Further details will be available on the website after 23rd June.

The Congress will have an open format, with oral presentations divided into common themes and a dedicated poster session. There will be a Plenary Session on the first morning (Tuesday 30th November) featuring presentations by award winners. Following this, concurrent sessions will be run with 20 minute seminar slots (15 mins + 5 mins for questions). Further details will be available on the website.

Congress Timetable

The Congress will commence with registration opening at 5pm on Monday 29th November, and a registration mixer from 6pm. Sessions will be held all day on Tuesday 30th, Thursday 2nd and also in the morning of Wednesday 1stand Friday 3rd, after which the Congress will close. There will be a BBQ and Postgraduate mixer on the Tuesday night and the Congress dinner on Thursday night. The AGM will be held late Thursday afternoon. A variety of mid-Congress (Wednesday afternoon) and post-Congress tours will be offered at additional cost. See website for further details.

Congress Dinner

For those of you who haven't been to church for a while here's your chance. Befitting the reputation of "City of Churches", the Congress dinner will be held in a converted old church, St. Paul's. This is on the corner of Pulteney St. and Flinders St. and is a short walk from the University of Adelaide. Maps will be provided at registration.

Full Price	$75
Student Price	$45

This covers a three-course meal and drinks for 4 ½ hours (beer, wine and soft drink).

Accommodation

There is a wide variety of accommodation available within walking distance. Accommodation links can be obtained on the ASL website.

Student accommodation is available at the adjacent Royal Adelaide Hospital Residential Wing on North Terrace just across the road from the University www.rah.sa.gov.au/aboutrah/accom.php. A Single room costs $13.20 per night with South Australian student identification and $17.60 per night without. These prices do not include meals. The single room contains a bed, wardrobe and desk/dresser. The bathroom, toilet, laundry, lounge and kitchen are all shared facilities. There are two shower, lounge and kitchen areas. Groceries can be purchased from supermarkets nearby in Rundle St Mall. Rooms are available from 30 November to 3 December 2004 at this stage. Accommodation is limited and will be allocated on a first come first served basis. If there are further enquires or you wish to confirm a booking please contact the Commercial Services Officer (Ph: 08 8222 5169, Email: prossi@mail.rah.sa.gov.au) as soon as possible.

NOTE: The nearby Hackney caravan park at also offers cheap accommodation.

TRANSPORT

Air Travel, Trains, Buses

The nearest airport is Adelaide Airport. The airport is 15 minutes drive from the city (non-peak hour). There are taxis and shuttle buses available at the airport. The cost of catching a taxi to the city is approx. $12-15 dollars and shuttle buses run from the airport via the Keswick (interstate) train station to the city and its motels for about $7. V-Line Trains run from Melbourne to Adelaide for about $60 ($30 student concession), more information including timetables are available at www.vlinepassenger.com.au. Buses (Greyhound, McCafferties, Fireflies, V-Line) also travel from interstate and are reasonably priced, for more information and timetables see www.sacentral.sa.gov.au/information/transport_timetables

Public Transport

Adelaide is well serviced with a public transport network of trains, trams and buses, which includes a free City Loop bus service. For more information including timetables and maps see www.sacentral.sa.gov.au/information/transport_timetables/

Parking

Public parking is available around the University Campus. In addition, the Adelaide City Council has successfully established a high-profile, accessible network of car parks called U-Park that offer "early-bird", and casual parking. More information on the latter is available at www.adelaidecitycouncil.com/discover/visitor/parking.htm

CHILDCARE

Childcare will be available at the Adelaide Campus Children's Centre. Individual Congress participants just need to contact the centre themselves regarding their childcare needs. Availability will depend on the age of child and current vacancies at the centre, and they are not likely to know vacancies until Uni ends in early November. Telephone: (08) 8303 6560 or (08) 8303 5429, Facsimile: 08 8303 6561 or 0 8 8303 4404 or email kaarin.wilkinson@adelaide.edu.au for further enquiries.

ABSTRACTS OF PRESENTATIONS

The specifications for Abstracts will be included with the registration details on the web and with the Membership renewal slips.

SPONSORSHIP OF CONGRESS

The Congress Committee has been successful in securing some sponsorship, but we can certainly do more if we receive more. If your organisation, or one that you know of may be able to contribute funds, goods or services in-kind, we would love to hear about it. Let Paul McEvoy know - contact details at back of newsletter.

Cheers, SA Congress Committee

STUDENT TRAVEL AWARDS

Applications are invited from research students for travel assistance to attend and present a paper or poster at the Annual Congress of the Australian Society for Limnology. The purpose of this assistance is to encourage students to present the results of their work in public. Students who are carrying out research in any branch of limnology for a higher degree are encouraged to apply.

The following rules apply for assistance:

1. Applicants must be full-time postgraduate students at any Australian University. There is no age limitation. Applicants must have current financial membership of the ASL for at least 6 months.
2. Assistance will be granted on the recommendation of a panel of three appointed by the Society.
3. Applications must include a written statement of no more than 200 words describing the research, its significance and the stage that has been reached. This statement must be endorsed by the student's supervisor. An abstract of the paper that the applicant proposes to present must also be included.
4. Award of assistance will be judged on: (i) significance of the work; (ii) originality and soundness of the research; (iii) the progress made and whether the stage has been reached where something useful can be presented; (iv) ability to present a clear and concise statement of the study.
5. Applications must be lodged with Dr Richard Marchant, Museum of Victoria, GPO Box 666E, Melbourne VIC 3001, by 1 October 2004. Applications can also be sent by email to rmarch@museum.vic.gov.au

MEMBER FEEDBACK

(IF YOU RECEIVE A HARD COPY OF THE NEWSLETTER, PLEASE PHOTOCOPY THE NEXT TWO PAGES AND RESPOND)

The Congress is all about ideas, right? This is the spot for a bit of disclosure from us, and a bit of response from the Membership. To achieve the sort of Congress that you are expecting or hoping to see – we need to be aware of your views.

If you wish, you can find an electronic version of this survey on the ASL web site or ask Paul to email it to you. Send your response to paul.mcevoy@sawater.com.au by fax to 08 8259 0228 or c/- AWQC, PMB 3 SALISBURY SA 5108

Do You have any comments/suggestions on what we have presented above?:

.....

.....

Are You intending to make it to ASL Adelaide 2004?:.....

If YES above, do you intend to present work?:.....;

In what format: ORAL POSTER

Congress Themes

We have a list from our local suggestions, but we are keen to hear about topics, techniques, policies etc. that are hot in other regions and disciplines that you think should be a part of the Congress. We will consider inviting speakers for the plenary or other sessions if it helps to support a particular theme.

SUGGESTIONS TO DATE:

- Ephemeral, saline inland waters;
- Waterproofing our Cities;
- Lateral connectivity;
- Environmental Baselines;
- Aquifer Storage and Recovery Schemes;
- The challenges presented by the River Murray;
- Integrated environmental assessments for NRM;
- Limnology of the Lake Eyre Basin

ASL Survey continues on next page

SOME Field Trip Options for the Congress

Numbers are always critical for trip planning, so the earlier we know, the better. Please indicate your preferences (✓; ×; use a rank if you like!)

Half Day Field Trips (potentially Wed afternoon 1/12)

- Chain of Ponds (wineries and Adelaide Hills limno issues)
- Goolwa Barrage Fishways and Murray Mouth
- Murray Gorge wetlands
- Fleurieu Peninsula Swamps
- Wastewater reuse for vineyards scheme and McLaren Vale Wineries
- Limno issues in SA (e.g. high conductivity ephemeral & groundwater-dependent streams)
- An afternoon of carp fishing in the Torrens?
- Golf at a nearby public course (both par 3 and full courses available)?

Post Congress field trips (departing Fri arvo or Sat?)

- Coorong overnight
- Flinders Ranges 3 days

If you wish, you can find an electronic version of this survey on the ASL web site or ask Paul McEvoy to email it to you.

Send your response to paul.mcevoy@sawater.com.au by fax to 08 8259 0228 or c/- AWQC, PMB 3 SALISBURY SA 5108

AUSTRALIAN SOCIETY FOR LIMNOLOGY MEDAL

CALL FOR NOMINATIONS

The Australian Society for Limnology Medal commemorates Hilary Jolly, a founding member of the Australian Society for Limnology, and is presented to a person who in the opinion of the Society, has made an outstanding contribution to Australian Limnology. The ASL Medal (formerly the Jolly Award) has become ASL's (and arguably Australia's) most prestigious prize in limnology, considered by members to indicate overall scientific excellence and outstanding achievement.

Any person may be nominated for the Medal, but nominations may only be made by financial members of the Society. The nomination must be in writing and must be seconded by a financial member of the Society. Nominations must address the relevant selection criteria and a current copy of the nominee's CV should be included if deemed appropriate. Each nomination will be assessed by a Committee of ASL which is chaired by the President.

An award is not necessarily made each year. Nominations for the Medal are accepted at any time, but for the Medal to be made for that year, the nomination must be made three months before the Congress. For consideration for the 2004 Congress, the closing date for nominations is Tuesday 31 August 2004.

The full regulations governing the Medal are outlined below.

Nominations should be forwarded to Assoc. Professor Andrew Boulton, (President of ASL), Ecosystem Management, The University of New England, Armidale NSW 2351.

The Regulations and Guidelines governing the ASL Medal are outlined on pages 16 and 17.

AUSTRALIAN SOCIETY FOR LIMNOLOGY

EARLY CAREER EXCELLENCE AWARD

CALL FOR NOMINATIONS

The Australian Society for Limnology Early Career Excellence Award aims to reward and encourage excellence by an early career limnologist who has contributed substantially to Australian limnology and/or aquatic ecosystem management. "Early career" is defined broadly as ≤ 10 years of involvement in a limnological career, and could be judged as commencing with postgraduate work in limnology or membership of ASL.

Any early career researcher who is a member of ASL may be nominated for the Award. Nominations may only be made by financial members of the Society and will hold for up to three years after nomination. The nomination must be in writing, confidential, and must be seconded by a financial member of the Society. Nominations must address the relevant selection criteria and a current copy of the nominee's CV should be included to support the case if deemed appropriate. Each nomination will be assessed by a Committee of ASL, which is chaired by the President.

An award is not necessarily made each year. Nominations for the Early Career Excellence Award are accepted at any time, but for the Award to be made for that year, the nomination must be made three months before the Congress. For consideration for the 2004 Congress, the closing date for nominations is Tuesday 31 August 2004.

Nominations should be forwarded to Assoc. Professor Andrew Boulton, (President of ASL), Ecosystem Management, The University of New England, Armidale NSW 2351.

Guidelines and Criteria for the Early Career Excellence Award are attached on pages 18 and 19.

THE AUSTRALIAN SOCIETY FOR LIMNOLOGY MEDAL (ASL MEDAL)

Regulations

The following guidelines have been developed with a view to maintaining a consistent procedure for the Society for awarding the Australian Society for Limnology Medal.

Selection Criteria

The ASL Medal will be awarded where an outstanding contribution to Australian limnology can be demonstrated by ANY OR ALL of the following:

- **RESEARCH EXCELLENCE**: the nominee has displayed excellence in any of the fields of limnological research, as demonstrated by key research papers and publications, or significant technological advances.
- **EDUCATION AND/OR COMMUNICATION EXCELLENCE**: the nominee has played a significant role in the advancement and dissemination of limnological knowledge, where this has enhanced the knowledge of Australian aquatic systems in a variety of forums.
- **MANAGEMENT EXCELLENCE**: the nominee has played a significant role in the protection of, conservation of, or management of Australia's limnological resources, and has shown administrative excellence in dealing with limnological issues.

NB. While the terms 'excellent' and 'significant' are relative and open to interpretation, the spirit of the award should be that the person has shown leadership and influenced others to achieve. Further, that influence should be sustained over a number of years. The Medal is not intended for administrative excellence and service to ASL. These are more appropriately recognised by other awards, such as Life Membership of the Society.

Membership and meeting of the ASL Medal Committee

1. The Committee shall consist of 3 members: The President and two others selected by the Executive. In establishing the Committee, each new Executive should consider an appropriate balance in terms of gender, discipline and backgrounds of research/management, but must ultimately ensure that the Committee has experience in the judgment of limnological excellence. This may include previous recipients of the Medal (or Jolly Award). No one person should sit on the Committee for more than 3 years.
2. The Committee should discuss the award at a meeting or by telephone or by email.
3. The Committee's Chairman will be the President (or nominee) and he/she will be responsible for organising the call for nominations, circulating nominations and arranging suitable meetings for the selection process. The Secretary of the Australian Society for Limnology will provide administrative assistance as required.

ASL MEDAL (CONT.)

4. The Committee will assess nominations and, where it deems that an award should be made, make recommendation(s) to the Executive, through the President, for final endorsement. A two-third's majority is sufficient for the Committee to recommend that an award be made.
5. A member of the Executive, or a member of the ASL Medal Committee, may not vote on a nomination where a conflict of interest is likely to occur. If the conflict of interest results in an inoperable Committee, the President (or nominee) is empowered to co-opt from the ASL membership for the purposes of a decision on the nomination.

NOMINATIONS

1. Any person may be nominated for the ASL Medal.
2. Only financial members of the ASL may nominate a person for the ASL Medal. The nomination must be in writing and must be seconded by a financial member of the Society.
3. Nominations must include a supporting statement addressing the relevant selection criteria and, if deemed appropriate, a current copy of the nominee's CV.
4. Assessed nominations will lapse immediately. Unassessed nominations (when the Committee has not been able to make a decision) will be forwarded to an incoming Committee.

CITATION

The announcement of an award will be made at the annual congress and will appear in the Society's Newsletter accompanied by a citation describing the reasons for the award.

AWARD VALUE

The nature and value of the award will be determined by the Executive Committee of the Society. The award will normally constitute a Medal (suitably inscribed), and an economy airfare, registration and reasonable accommodation costs will be paid for the recipient to attend an Annual Congress (see below).

CONDITIONS OF THE AWARD

Unless extenuating circumstances are operating, the Medal can only be awarded (and presented) to the recommended recipient in person at the next Annual Congress of the Australian Society for Limnology. In accepting the award the recommended recipient will be required as a condition of the award to present the "Hilary Jolly Memorial Lecture" to be scheduled during the Annual Congress. The Award address should be accompanied by a paper intended for publication in a refereed international journal, and the paper should include a footnote or byline to indicate its significance.

Prepared by a sub-committee of the Australian Society for Limnology, January - June 1998.

THE ASL EARLY CAREER EXCELLENCE AWARD

PREAMBLE

At the ASL congress in Darwin in 2000, it was suggested that ASL consider providing an award to encourage and reward 'young achievers' in the field of limnological excellence. This could be analogous to the Hynes Award offered by the North American Benthological Society for "excellence in benthic research by an investigator who has recently completed a degree program". Terms and a name for this Award were discussed at the AGM of ASL in Moama in 2001, and the Award was given for the first time in 2002. The following guidelines were developed with a view to maintaining a consistent procedure for the Society for awarding the Australian Society for Limnology Early Career Excellence Award.

AIM OF THE AWARD

The Award aims to recognize and encourage excellence by an early career limnologist (defined below) who has contributed substantially to Australian limnology and/or aquatic ecosystem management.

GUIDELINES

"Early career" is defined broadly as $\leq$ 10 years of involvement in a limnological career, and could be judged as commencing with postgraduate work in limnology or membership of ASL. This guideline would be applied at the discretion of the Committee but seeks to differentiate contenders from those for the ASL Medal who are commonly more senior in their career.

Criteria for the Award include:

(i) Current financial membership of ASL;
(ii) Evidence of professional limnological excellence, potentially including successful completion of a Masters or PhD thesis in limnology within the last 10-15 years;
(iii) Tangible evidence of excellence represented by one or a combination of: high quality published papers or other scholarly media; substantial improvements in 'on-ground' water resource management; peer recognition by invitations to speak at conferences or to contribute to special session; overseas experience applied to Australian limnology; excellence in communication, extension and education in limnology.

PROCESS OF SELECTION

Confidential nominations by a member of ASL and seconded by another financial member, must be made to the President. To be considered for a given year's Award, the nomination must be sent to the President at least three months before the Annual Congress. The written nomination must include evidence for the above criteria but must be kept confidential from the nominee, and could include a current CV to support the case if deemed appropriate.

THE ASL EARLY CAREER EXCELLENCE AWARD (continued)

Nominations will be called for each year and an application will hold valid for three years unless successful. There need not be an Award made every year. The winner will be announced at the Annual Congress, and a short report will be published in the newsletter.

Panel Membership

The Panel, comprising at least three ASL members, is chaired by the ASL President who has the power to co-opt panel members as she or he sees fit. It is expected that at least one Panel member will be a previous winner of the Award. In establishing the Committee, there should be an appropriate balance in terms of gender, discipline and backgrounds of research/management, but must ultimately ensure that the Committee has experience in the judgment of limnological excellence. No one person should sit on the Committee for more than three years. A member of the Committee may not vote on a nomination where a conflict of interest is likely to occur. If the conflict of interest results in an inoperable Committee, the President (or nominee) is empowered to co-opt from the ASL membership for the purposes of a decision on the nomination.

The Award

The Award will be a certificate and a financial prize whose value will be determined by the Panel in consultation with the Treasurer. The Award will be presented at an ASL congress where the winner will be asked to present a short address with excerpts for publication in the Newsletter.

MARINE & FRESHWATER RESEARCH

CSIRO PUBLISHING and MFR are pleased to present members of the Australian Society for Limnology with a special trial subscription offer.

For three months, you can receive online access to any of four featured journals:

Marine & Freshwater Research
Environmental Chemistry
Australian Journal of Botany
Invertebrate Systematics

See the enclosed flyer for details or go to the ASL members page at http://www.asl.org.au/

Offer must be taken up by July 31 2004 - Please hurry!

Dugald McGlashan

SCUTTLEBUTT, RUMOUR AND PRATTLE

SCHOOL OF ECOLOGY & ENVIRONMENT, DEAKIN UNIVERSITY, WARRNAMBOOL

(Eds. Note: Belinda is emphatic that she emailed this to me for the March edition, however, it never arrived, so although this is a bit dated now, I've included it fyi).

Well, after hosting the ASL congress we all collapsed in a heap. **Ty Matthews** went fishing in New Zealand and **Belinda Robson** did Margaret River (beaches, wine etc). Thanks to everyone who wrote, phoned or emailed to say that they had a good time - it has been very gratifying for us and we are pleased with how it went. **Mini Hogan**, who was projectionist in J201 has received a PhD scholarship and will start soon with Belinda looking at Grampians streams. **Amanda Cowell** is starting honours with Ty looking at the effects of bushfire on streams. **Peter Lind** has (almost) handed in his PhD thesis and is now working on a project funded by the Glenelg-Hopkins CMA looking at the relationships between flows, drought refuges and algae in the Grampians - with Ty and Belinda.

Tom McRae had an interesting experience recently. As part of a research project in a completely different field (hydroponics) he was asked to visit a development project in the northern Maldives. Whilst there, they picked his brains in groundwater management for the agriculture part of the project. The island had a total area of 1 sq. km, reaches no more than 1.5 m above sea level and has about a third of the area used for agriculture. The entire freshwater supply is a lens about 300 mm thick floating on a tidal saltwater aquifer. They had 16 wells from which (almost) freshwater was pumped into header tanks for hand watering of the crops. Their pumps could have removed all of the freshwater from the island in about 12 days. Needles to say, very cautious management was advised.

As an aside - this particular island had a small lake which contained some fish. Yet the island was (until 5 years ago) uninhabited. Are these fish fresh or salt water species, how did they get there, and who can provide the necessary funds to do the appropriate research?

From

Belinda Robson

QLD Department of Natural Resources, Mines, and Energy (NRM&E)

NRM&E Regional Biologists

In Mackay, **Cath Thrupp** and **Craig Broadfoot** have been busy in the field with **Peter Hancock**, sampling groundwater bug sampling near Collinsville. Prior to that they were working with the Mackay hydrographers to map waterholes in the Fitzroy using Doppler acoustic equipment. Upcoming work will include Ambient sampling with the AEH group in both the Fitzroy and Pioneer catchments.

The Bundaberg Regional Biologists team, **Andrew Mc Dougall** and **Marcus Finn**, have been researching the ecology of yellowbelly to determine the research needs for the Fitzroy Basin Resource Operation Plan (ROP). In addition, the team has been collating information on the first trigger flow in the Boyne Basin ROP (near Gladstone) where a flow was released into the estuary for the first time in 8 years. **Tariq** and **Minal Kahn** at Goondiwindi have been sampling for the ambient project.

Aquatic Ecosystem Health Unit, Indooroopilly

As we approach the end of the financial year, **Jon Marshall** has been busy coordinating the development of next year's projects. Jon also organised the AEH units external science review, which took place in early May.

Marty Hancock has joined the unit, and is charged with collating all of the field, laboratory, and analytical methods used by the AEH unit. This is all part of our QA program. **Nelli Horrigan** and **Jason Dunlop** are continuing their literature review for the National Action Plan for Salinity, and have begun generating conceptual models. They also are in the advanced stages of their analysis of state-wide historical data and modelling the impact of salinity and turbidity on stream macroinvertebrate communities.

All the data is in for the Condamine project and **Alisha Steward** has been busy learning the R statistical language and completing complex mulitivariate analyses. **Michelle Winning** has been busy on the Fitzroy Resource Operation Plan - Ecological Monitoring and Assessment Program. Many members of the unit have been doing field work, **Di Conrick**, **Alisha Steward**, **Chris Thomson** and **Andrea Prior** sampling various parts of the state for the Ambient project, and **David Moffatt**, **Dean Holloway**, **Susan King**, **Toni Radcliffe** and the rest of the Ecological Health Monitoring Program team have been out sampling 120 sites in SE Queensland. **Peter Hancock** has been sampling groundwater invertebrates west of the Pioneer Basin and the Bundaberg region. **Glenn McGregor** and **Marc Seifert** have commenced sampling for Marc's PhD work on the ecotoxicological effects of cyanobacteria. **Jaye Lobegeiger** and Glenn continue their analysis of blue-green algae samples.

From

Peter Hancock

ECOWISE AND WSL CONSULTANTS

Effective 1st April 2004, ECOWISE Environmental merged with WSL Consultants. The newly formed group is now Australia's largest environmental analytical, monitoring and consulting group. Both organisations currently employ a number of ASL members, and the combined aquatic ecology group has labs in Brisbane, Canberra and Melbourne. The two organisations will continue to operate as usual, however, integration of services has already commenced with **Kim Piercy** from Brisbane ECOWISE and **Daniel Salienko** from WSL undertaking macroinvertebrate, vegetation and mammal surveys on the Burnett River south-west of Bundaberg. The combination of staff and experience from around Australia will increase the range of services provided by ECOWISE/WSL.

Garry Bennison continues to lead the Aquatic Ecology group. His experience and broad knowledge of the environmental and water industries will continue to provide ECOWISE with guidance and direction. Those at WSL who have worked alongside Garry attest to his energy and commitment, and all at WSL look forward to working more closely with Garry. **Patrick Maiden** will remain as manager of the Melbourne aquatic ecology team. Garry and Patrick are working closely to ensure that the best practices from each lab are shared across the new group. **Denise Betts, Cameron Amos** and **Patrick Maiden** have been investigating the potential risk of 'swimmers itch' caused by trematodes in Melbourne's stormwater wetlands. Previous studies indicate that the most likely trematodes to cause the terrible itchy rash are schistosome cercariae, which are associated with aquatic snails and water fowl. However, initial results indicate the presence of a different type of trematode, which may or may not cause the rashes. Further investigations will be used to minimise the health risks associated with working in shallow wetlands. **Chris Bloink** and **Cameron Amos** commenced the fieldwork for a new monitoring project of Macleods Morass commissioned by East Gippsland Water. Macleods Morass is a deep freshwater marsh that receives treated wastewater and stormwater from Bairnsdale. The morass is a RAMSAR wetland in the Gippsland Lakes area, and the new project involves bird, vegetation, fish, amphibian, macroinvertebrate and water quality surveys for three years. Hopefully the monitoring will provide useful data for incorporation into the development of wetland monitoring protocols and RAMSAR monitoring requirements. **Denise Betts** and **Genevieve Hehir** were part of the fieldwork reinforcements required to maintain the morale in the cold and wet. **Patrick Maiden** was joined by **Rhonda Butcher** and **Jim Reside** on a site visit. Rhonda will review the monitoring program and be involved in the adaptive monitoring design. Jim is leading the flora and fauna surveys, and his local expertise is invaluable for maintaining an understanding such variable systems. **Dan Vertessy** has spent much of the past three months bound to the computer completing numerous reports for our friends in the water authorities. Fortunately he has been able to lead the fieldwork for the Melbourne Water monitoring program. Those who recall Dan's days in the rock industry will be glad to hear that he has been recording new music and is starting to get the itch for performing again. As per usual, **David Bryant** has taken leave to be part of a reconnaissance adventure in outback Western Australia. Dave is following the path of some obscure colonial explorer, hoping to find a potential route for outback exploration tours. Dave has also completed the preliminary mosquito monitoring around stormwater wetlands, and identified a few coastal wetlands that have substantial mosquito populations.

Patrick Maiden

FRESHWATER ECOLOGY, ARTHUR RYLAH INSTITUTE FOR ENVIRONMENTAL RESEARCH, DEPARTMENT OF SUSTAINABILITY AND ENVIRONMENT

Sabine Schreiber and **Charles Todd** continue their work on the NAP-funded Wetlands, Biodiversity and Salt project as well as on the CRCFE Predicting the spread of invasive species project. **Keely Ough** is also involved on the NAP project as well as frantically writing up her PhD. **Belinda Cant** has started a PhD associated with this project and is now based in the School of Biological Sciences at Monash University. Freshwater Ecology would like to welcome **Changhao Jin** to ARI. Changhao is working on the NAP salinity project with Sabine and Charles. Changhao has been developing models for understanding the dynamics of wetland biodiversity. The model takes into account the interactions among wetland biodiversity, salinisation and other environmental factors. The effect of salinity on the biodiversity of wetlands is addressed. Previously Changhao conducted research on complex systems and dynamical systems at the University of Melbourne, the University of Munich, and the University of Dortmund.

Shanaugh McKay and **Alison King** have finished a fieldwork experiment to investigate the effects of water extraction in unregulated streams in the Yea Catchment (NE of Melbourne). Along with the many others who didn't know what they were in for, we are now experts in building weirs using polymer filled floodwater bags and joining large heavy pipes together, and our backs held up to it. There are now plenty of bug samples to keep us busy in the lab as the cold weather rolls in and the water pours out. With the increasing requirement for lab space an old dishwasher was removed which resulted in a minor flood which soon turned into a water feature downstairs in the offices of **Phil Papas**, **Di Crowther** and **David Crook**. It reminded me of the water wall at the National Gallery. Very artistic! The floodwater bags are now on stand by for the next flow diversion.

Phil is working with Janet Holmes to develop a method for determining wetland condition in Victoria. The 'Index of Wetland Condition' (IWC) will be the first statewide method of its type and will be applied to wetlands by Catchment Management Authorities (CMAs). The project is engaging wetland ecologists, CMA and wetland policy staff to assist with expert input and guidance. For more information on the project contact Phil (phil.papas@dse.vic.gov.au). Phil and Di have recently undertaken an AusRivAS training course run by the Vic. EPA and completed a University of Canberra on-line course for accreditation in AusRivAS data analysis and interpretation. Di and **Mike Nicol** have also undergone testing for AusRivAS sampling and will shortly be tested for invertebrate ID and analysing data for state environment objectives.

Di and Mike have been roaming the countryside sampling ISC sites in the Glenelg and Loddon regions and have been kept busy with bug id's. Di is currently in the process of developing an AusRivAS type model for the South East NSW Forests region with data that has been collected over the past three years. The bug group welcomes **Claudette Keller** who has been tirelessly sorting and identifying bugs from core samples collected in the Cropper Creek catchment in North East Victoria.

Claudette is in the final stages of writing up her PhD thesis at Monash Uni. on the effects of different water regimes on the assemblages of macroinvertebrates. Claudette escaped the lab last week on a fieldtrip to North East Victoria and then the Otways with Mike.

This year has seen **Ruth Lennie** assisting in the aquarium on a project with **David Crook** which is using chemical signatures to identify hatchery-reared and wild fish. Ruth has kept busy updating the Aquatic fauna information Systems data base and helping Sabine with the collation of references for the NAP funded Wetlands, Biodiversity and Salt project. Ruth has also been assisting the bug group with fieldwork in North East Victoria and also in Glenburn on the flow diversion project.

Freshwater Ecology would like to welcome **Mike Smith** and **Bill Dixon** to the group. Mike and Bill have commenced work with Freshwater Ecology on separate NAP funded salinity projects with **Sabine Schreiber**, **Tom Ryan** and **Pam Clunie** (currently on maternity leave).

Mike completed a Resource and Environmental Science degree with honours at the University of Canberra and then completed a PhD at the University of Western Australia. Mike's PhD was largely concerned with the biology of Western Australian amphibians. After that Mike moved to Sydney for a while to work on crickets at the University of New South Wales and then to a Post Doctoral position in Missouri (USA) to work on the frog *Hyla versicolor*. Mike is currently working on the "Functional Relationships" project with Sabine and is also involved in research on the "good genes hypothesis" in *Hyla versicolor* through an NSF funded project.

Bill previously worked at EPA Victoria developing guidelines for ecological risk assessment in aquatic environments while completing his PhD on 'Uncertainty in Aquatic Exposure-Effects Models'. Bill is currently working on a NAP/NHT funded project on strategic frameworks to indicate biological thresholds to salinity with Tom and Pam. This involves developing decision frameworks and salt impact models for risk assessment of the effects of salt on aquatic and terrestrial organisms.

Steve Saddlier has been busy in the field surveying waters near Geelong to assess potential impacts of the proposed Geelong Bypass. Streams surveyed include the Moorabool River, Armstrong Creek, Cowies Creek and Waurn Ponds Creek (a hot spot for the Yarra Pygmy Perch). Steve has also completed surveys of Wetlands on Tamarisk Creek near Langwarrin to assess the likely impacts on fish fauna of altered drainage patterns resulting from a proposed housing development. Steve has kept busy writing up the National Recovery Plans for Dwarf galaxias *Galaxiella pusilla*, Yarra Pygmy Perch *Nannoperca obscura* and Variegated Pygmy Perch *Nannoperca variegata*. Tom and Steve have completed fish surveys (primarily for Blackfish) and Di and Shanaugh completed macroinvertebrate surveys of the Gellibrand River near Gellibrand prior to willow removal works by the Corangamite CMA.

Alison King has come back refreshed after a four week holiday in SA and is ready for more larval fish sampling. **Alison**, **David Crook** and **Zeb Zonkin** are off to Townsville in July for the 3rd International Symposium on Fish Otolith Research & Application. It will be a great place to escape the cold Melbourne weather.

Freshwater Ecology welcomes **Jed Macdonald** to the crew to help out on a few projects. Jed completed two years of an Arts/Science degree at Melbourne University then decided that south was a good direction to travel and moved to Hobart to complete a BSc degree in Zoology at the University of Tasmania. Jed completed an honours project the following year examining fish passage at road culverts which involved the design, installation and testing of a new baffle system to aid upstream movement of two galaxiid species. A short contract at the Inland Fisheries Service working on the Carp Management program in Lakes Sorell and Crescent followed, after which Jed headed overseas to China and more recently the UK. Based in York, England, Jed worked with the Environment Agency on their annual fish population survey program in the Yorkshire Dales rivers. Jed returned to Melbourne around two months ago and is presently immersed in the surreal world of otolith microchemistry at ARI.

As part of the Victorian Recreational Fishing Grants Program 2002/03, **Wayne Koster** and **David Crook** have commenced a program to obtain baseline data on fish populations in the Goulburn River below Lake Nagambie for the Goulburn Valley Association of Angling Clubs. The study sets out to investigate seasonal and annual variation in fish populations, recruitment from stocking programs and natural breeding, and the status of pest species and endangered native species. The results of the first nine months of the study are currently being analysed and will be documented in a report due out in July 2004.

David is also working on several projects relating to otolith chemical analyses at the moment, including an ARC Linkage project in collaboration with **Bronwyn Gillanders** and **Andrew Munro** (Adelaide University) and **Andrew Sanger** (NSW Fisheries). This project aims to develop practical mass marking techniques using rare earth elements to allow discrimination between hatchery fish and natural recruits, and will also track the success/impacts of stocking in experimentally stocked rivers. The project runs for three years and the first year of laboratory experiments are now finished. **Andrew Munro** is currently chasing golden perch otoliths from the Murray-Darling Basin for the project - if you can help, please contact Andrew (Andrew.Munro@adelaide.edu.au). David is also working in collaboration with **Jane Hughes** and others on a CRCFE project which integrates genetic analyses with otolith chemistry to examine patterns of fragmentation amongst fish populations.

Rug up and keep warm!

From

Shanaugh McKay

UNIVERSITY OF NEW ENGLAND, ECOSYSTEM MANAGEMENT

As the winter chills grip the Tablelands, research on coastal rivers looks more palatable. PhD students **Emilie Warner** and **Ruth Harlow** enjoyed a canoeing trip on the Nymboida River (apparently selecting sites) but are now refining their study questions and developing their research approach guided by **Barb Downes** as they apply the famous 'framework' outlined in Downes et al. (2002) to assessment of effects of changes in flow when the Shannon Creek Dam comes on line in the next few years. **Judy Davies** has finished her Honours project on the effects of camphor laurel litter on aquatic invertebrates in several North Coast streams, concluding that while calamoceratids prefer to build their cases from camphor leaves, in general there is a decrease in shredders and overall macroinvertebrate densities in the streams lined with camphor laurel compared to those with native vegetation in the riparian zone. Transfer experiments of mayflies indicated the leachate is the culprit but this needs more work to find out the exact mechanism. Other coastal projects include macroinvertebrate colonization of 'wood-packs' in the Hunter River and of artificial substrates in Woolgoolga Creek – results from those Honours projects by **Jill Scealy** and **Kristy Munro** next time (when they have had a chance to pick the immense numbers of bug samples!)

The other interesting findings lately have been from the work on the 'son' fishways being done by **Tony Townsend** and **Debbie Burgis.** While 'father' fishways are the politically incorrect reference to large fishways, juvenile or small species of fish may be more able to traverse weirs via the smaller 'son' fishways where flows may not be so rapid. Early results in a model 'son' fishway have revealed strong differences in swimming behaviour, speed of travel, and use of the water column by silver perch and Empire Gudgeons when the bed-plates of the fishways contain different configurations of cobbles and pebbles. The picture, at this stage, is not clear – the expected pattern that a more complex bedform would promote increased use of the fishway has not resulted. Even more intriguing is the finding that vertical use of the water column by fish is strongly influenced by the bedforms – and we thought gudgeons would stay near the bottom!

Next scuttlebutt, we shall have details of **Kim Jenkins** and **Darren Ryder's** work west of the Divide – I'm afraid time got away from me before I could get a contribution from them.

From

Andrew Boulton

CRC FOR FRESHWATER ECOLOGY

Customised courses for the water industry

The CRC for Freshwater Ecology is developing new initiatives in education and training, mainly directed at water industry personnel, following a survey and workshop with CRCFE partner organisations to determine relevant water issues, and education and training needs.

It is proposed that courses will use flexible-delivery systems similar to those that supply the successful AUSRIVAS Online course. They will consist of modules of information, be self-paced, and be accessible from remote locations via the Internet, with face-to-face components only where necessary. Students have been found to learn and remember much more when given time to internalise information, as in self-paced courses, than when in intensive face-to-face courses. For details, please contact Professor Richard Norris, phone 02 6201 2543 or email norris@lake.canberra.edu.au .

AUSRIVAS
Australian River Assessment System

Register now for the next AUSRIVAS course

The AUSRIVAS Online training course is offered twice a year by the CRCFE and the University of Canberra. The course aims to teach the skills and knowledge needed to assess river health to an acceptable standard using AUSRIVAS methods. Those who complete its requirements successfully are eligible for accreditation from the relevant state or territory agency.

There are no prerequisites for this short (12 weeks) non-award course, other than registration and payment. The theory of assessing river health can be learnt entirely online in four interactive modules. A 4-day practical face-to-face workshop is offered as a fifth module, teaching the practical skills required.

The next AUSRIVAS Online course is scheduled to start on 26 July 2004, if there are sufficient enrolments. Please register your interest by 1 July 2004. Otherwise, the next course will begin on 21 February 2005.

To register, visit the following website, or contact Sue Nichols at nichols@lake.canberra.edu.au
[http://ausrivas.canberra.edu.au/Bioassessment/Macroinvertebrates/Training/]

From

Sue Nichols

AUSTRALIAN BIOLOGICAL RESOURCES STUDY

The Australian Biological Resources Study (ABRS) began a new phase in delivery of biodiversity information towards the end of the 1990s, and, more recently, specified a new category for grant proposals.

Responding to changing community needs, a greater emphasis is now placed on web delivery as the medium for dissemination of ABRS-held taxonomic information on Australia's flora and fauna. While we are still publishing books for which there is a perceived need, most checklists are going online. And whilst still awarding competitive grants for research projects, we now invite applications for projects aimed specifically at delivery to ABRS of 'biodiversity products' such as keys and checklists for addition to our online resources, or for electronic (CD) or hard copy publication.

We have reached a stage where we can report good progress in these new directions on taxonomic groups and projects of interest to aquatic biologists. At our web address (below), in the ABRS *Australian Faunal Directory* (AFD), you can find reasonably up-to-date taxonomic and nomenclatural data, usually together with brief ecological and distributional notes, on representatives of all the minor aquatic insect orders, nematoceran Diptera, most aquatic beetle groups, aquatic Heteroptera and freshwater sponges, bivalve molluscs and malacostracan Crustacea. Further groups are being prepared currently for addition to the AFD, including aquatic gastropods, bryozoans and rotifers. We welcome proposals for additions to the AFD, and offers for updating of existing groups.

An interesting ABRS-managed, NHT-funded project will make available online habitat characterisations for selected aquatic invertebrates. This project, under the direction of Phil Suter at Sturt University, is now nearing the end of its second year of funding. Stage 1 developed, as 'Proof of Concept', an online version of the *Aquatic Habitat Characterisations for Queensland Ephemeroptera*, and was completed successfully in June 2003. Further data added over this year and next will expand the resource to provide a useful, nationally applicable, support tool for river monitoring projects.

Other ABRS recently funded projects on Australia's aquatic fauna include several research grants to investigate and document stygofauna (amphipods, ostracods, beetles), and others on planarians and freshwater crabs and gastropods.

Most of the names in the ABRS databases are now accessible via standard web search engines such as *Google* and *Yahoo* or you can find them through the ABRS web address at www.deh.gov.au/abrs.onlineresouces.

Among ABRS' other recent news is that the *Flora of Australia Online* was launched in March this year. All information from many of the published volumes of the *Flora of Australia* (some of them out of print) can now be found online, including keys. The plan is to add all the published volumes to this facility — if you cannot find a name now it probably means that the volume has not yet been placed on the website, either because it has not published, or has not yet been added to the database.

The last item of news is the development of the Australian node of GBIF, the Global Biodiversity Information Facility. This is an outcome of Australia's commitment as a signatory to, and active participant in, GBIF. The Australian participants in GBIF proposed that ABRS should host the 'node', which is the portal through which the distributed databases feed into GBIF. The Australian node is now active, giving a single entry point to (at least) the AFD, the Australian Plant Pests and Diseases Database, and the Australian Antarctic Division's database. This is just a beginning, it is hoped that, eventually, distributed databases such as Australia's Virtual Herbarium (AVH) and the faunal equivalent (the prototype is OZCAM) will be made available through the GBIF node.

From

Alice Wells
Joint Manager
Fauna Subprogram
ABRS

AUSTRALIAN CENTRE FOR TROPICAL FRESHWATER RESEARCH, JAMES COOK UNIVERSITY, TOWNSVILLE

The ACTFR enters its 18th year of operation with a wide array of projects and a packed agenda. New directions this year include incorporating science into the NHTII regional planning processes. ACTFR staff are heavily engaged with providing technical support to the six regional NRM boards in north Queensland in developing their NRM plans and in undertaking priority investment projects. We also welcome new staff member, **Aaron Davis**, who joins us after 7 years as hydrographer with the Qld. Dept. of Natural Resources and Mines.

Five ACTFR staff (**Damien Burrows, Jon Brodie, Barry Butler, John Faithful, George Lukacs**) gave presentations at the recent Catchment to Reef conference and **Damien Burrows** recently presented on aquatic management challenges for the Gulf of Carpentaria rivers at the Gulf Birds and Wetlands workshop in Karumba. **Jon Brodie** is accumulating frequent flyer points, recently travelling to New Britain and twice to Malaysia, for projects relating to reducing runoff from agricultural lands to nearshore coral reefs, plus an upcoming trip to Okinawa for the Int. Soc. for Reef Science conference in July.

Congratulations to **Colton Perna** for successfully completing his Masters degree. Colton studied interactions between habitat condition, water quality and weed infestations on fish communities of Burdekin River floodplain lagoons. He also demonstrated rapid and dramatic improvements in water quality, and a doubling of fish species richness, after mechanical harvesting of water hyacinth from several heavily infested lagoons. After a well-earned overseas holiday, Colton is now resident fish biologist at ACTFR as well as starting his own business 'E Fish' offering fish-related services with his new custom-designed electrofishing boat.

Denise Betts and **Andrew Bengsen** both successfully completed their Honours degrees on, respectively, the spatial and temporal dynamics of aquatic invertebrates and the benefits of riparian fencing and weed control projects for bird communities. Both quickly found scientific employment.

Brad Pusey (Griffith Uni) recently joined **Colton Perna** and **Damien Burrows** for some field time on a project in the upper Burdekin undertaking fish and habitat monitoring with members of the Gugu Badhun tribe, traditional owners of the region. Brad was also able to add to his long-term fish datasets by visiting some of the field sites he had regularly sampled during the 1990's. Findings from the project included the first discovery of an exotic fish (mosquitofish) in the region, a decrease in the abundance of translocated sleepy cod (after rapidly increasing during the 1990's), and an apparent failure of sooty grunter recruitment this year.

From

Damien Burrows

SCHOOL OF TROPICAL BIOLOGY, JAMES COOK UNIVERSITY

The Cairns rainbowfish (*Cairnsichthys rhombosomoides*) exhibits a highly restricted distribution to the upper tributaries of the drainages it inhabits. **Paul Theusen** is well into an honours project that will determine whether this lack of connectivity between populations may be due to competition and/or predation, and if subsequent isolation creates patterns of population genetic divergence. Such a scenario would have two important implications: firstly, biodiversity processes in freshwater taxa may be strongly influenced by interactions between species; and secondly, isolated populations of the paleoendemic rainbowfish may represent evolutionary significant units, needing individual management plans. Paul is a Rainforest CRC student.

Meanwhile, **Tom Rayner** has been in the field completing a wet season sample of the Mulgrave River (just south of Cairns) for his PhD. Tom is investigating the trophic dynamics of the fish communities of the lowland floodplain section of the river. Of particular interest is the change in fish feeding in response to seasonal fluctuations in flow conditions, habitat structure and food availability. Tom aims to produce a model incorporating these dynamics that can provide some predictive power to stakeholder groups. To date, financial and in-kind support has been provided by the joint Rainforest CRC, Griffith University, QDPI, and JCU.

Nicole Flint has almost completed a series of experiments towards her PhD investigating the sublethal effects of diurnally fluctuating hypoxia on tropical freshwater fish. Results include effects on growth, food consumption, ventilation, behaviour, reproduction, egg viability and histopathological changes to major organs. Funding has been provided by the sugar industry and Commonwealth Government through the Sugar Research and Development Corporation, and by the Queensland Government through the Department of the Premier's Growing the Smart State PhD Research Funding Program.

In between developing methodology to monitor streams in the Wet Tropics for Task 3 of the Catchment to Reef program (a joint Rainforest and Reef CRC initiative) **Niall Connolly** has been trying to find time to write up his PhD that has looked into the relationships between the spatial distribution of a limiting resource and the community structure of macroinvertebrates inhabiting a rainforest stream.

Faye Christidis has recently completed her PhD on the phylogeny of Leptophlebiidae. **Luz Boyero** is visiting from Spain on a 2 year postdoc looking at biodiversity and ecosystem function - leaf litter and shredder rates. **Tony Dell** is on perpetual holiday around the world. He says he's attempting to understand complex systems, but we're not so sure.

From

Tom Rayner

SINCLAIR KNIGHT MERZ, MELBOURNE

The last few months have been a busy time for the ecologists at SKM.

Michael Shirley has been leading a project where SKM and the MDFRC Lower Basin Laboratory are running the South Australian Murray Wetland Baseline Survey. Over the last few months we (plus our partners AWQC and Ecological Associates) have had a cast of thousands out surveying the biological communities and physical structure of 40 wetlands along the river. Anthony (Rex) Conallin (MDFRC), **Michael Lake**, **Andrew Sharpe**, **Melinda Holt**, **Erin O'Donnell** and Lara Suitor (MDFRC) spent many weeks on the wetlands supported by a multitude of other team members. We now commence the task of compiling the data.

Simon Treadwell and **Kylie Swingler** with great assistance from **Rory Nathan** have just completed a project that developed an ecological model for testing the effects of thermal pollution on response variables such as fish spawning and survival. The model can be applied downstream of large dams and can be used to model the effects of changes in thermal regime on aquatic health and ecosystem condition. Simon and Kylie are now about to start a project collating and analysing fish survey data from around the Murray-Darling Basin to identify trends in fish distribution.

Rod Hardwick has completed an 18 month secondment to Melbourne Water and has now moved to SKM's Newcastle office. He is still doing work for Melbourne Water though and is developing a rapid assessment method for determining the condition of urban streams.

Kylie Lewin is completing a water management plan for Moodies Swamp in northern Victoria, a significant Brolga breeding area and is also undertaking a number of environmental risk assessment projects examining the relative threats and benefits of a number of water savings projects in northern Victoria.

Emma Connell with assistance from Erin and Simon is examining options for improving fish passage on Gowangardie Weir on the Broken River, options include the installation of a fishway or decommissioning the weir.

From

Simon Treadwell

WATER ASSESSMENT AND PLANNING BRANCH, DEPT. PRIMARY INDUSTRIES, WATER AND ENVIRONMENT, TASMANIA

Well, there must be something in the water down here, as we've got five staff expecting babies in the next six months!! **Alistair Brooks** will even manage to scoop the double bonus $6000 government allowance! **Bec Pinto** made it back just in time to announce her next arrival, in September. The Environmental Flows team will have to do without her expertise once again.

We'll be saying a fond farewell to our star Facilitator, **Abi Foley**, she's heading up to the warmer climes of Ballina to commence a position with Wetland Care Australia. No doubt she'll get bored of the same old predictable sunshine and twenty-something degree water in no time, and be back in a matter of months.

The MRHI Autumn sampling round (135 sites) went relatively smoothly, apart from **Chris Cleary** breaking his ankle on his debut, and **Tom Krasnicki** missing a corner in the Hilux, resulting in an exciting encounter with a boundary fence.

The National Action Plan projects have been keeping a number of us busy, particularly in the Little Swanport catchment, where **Danielle Warfe** (Dr. Dan) and **Justine Latton** have been working on a holistic method for recommending environmental flows. Associated electrofishing surveys netted us all the usual suspects (trout, redfin, tench, common jollytail, trutts) as well as long-finned eels, the endangered Swan galaxiid, and even an Australian grayling, which got Dan uncommonly excited, being the first she'd ever seen. We also found the first mainland yabby (*Cherax destructor*) in the catchment earlier this year.

Martin Read and Dan have had the exciting task of presenting water balance models and the environmental flows methodology to the community, and Dan's now looking forward to her trip to Vancouver in a couple of weeks to attend the NABS conference on her Bill Williams Travel Scholarship.

Other NAP projects include **Kate Wilson** and **Chris Cleary** training up community groups in water quality monitoring, and **Tom Krasnicki** and **Dave** "Hornblower" **Horner** in river health monitoring, which you might know as AusRivAS. Participants in the course have come from within DPIWE as well as Inland Fisheries and waterwatch/NRM groups. All reports have been glowing, and we've even managed to rope in a newly-qualified trainee (**Elizabeth Schrammeyer**) to help us identify our plethora of macroinvertebrate samples.

Russell Goodwin and **Chris Dalgleish** of Brooksy's stream gauging crew have been out in the field since January, at least we think so because no-one can remember what they look like anymore. And our own White Wizard, **John Whittington**, has been waving his staff and working all kinds of magic on the managerial front.

From

Justine Latton

CHARLES DARWIN UNIVERSITY

There has been a good deal of recent activity at Charles Darwin University (CDU) focused around the riparian zones of tropical streams as part of the Tropical Savannas CRC Riparian Health Project. **Ian Dixon** has been employed as a research associate for the project and with **Michael Douglas** and colleagues at ACTFR (JCU) they are developing a robust method for land managers to rapidly assess riparian vegetation condition in northern Australia's savannas-the Tropical Rapid Appraisal of Riparian Condition (TRARC). The TRARC scores simple vegetation indicators from visual ground assessments to derive an index of condition. It is intended that land managers and interest groups with limited time and scientific knowledge will be able to easily assess and monitor the condition of their riparian vegetation. Ian has begun trialing new methods in the NT, mostly in collaboration with **Simon Townsend** from the Water Monitoring Branch - NT Department of Infrastructure, Planning and Environment. Testing sites in the Top End have coincided with the Department's water monitoring sites in the Douglas-Daly and Darwin regions. Other sites have focussed on streams of interest to Traditional Owners of Kakadu National Park. Park rangers have also been introduced to the trial methods and it is intended that future collaboration will extend to other land management and community interest groups. The TRARC will continually be tested, validated and modified if necessary, with a user-friendly manual to be published in 2006.

Nicole Cranston is just over a year into her PhD project entitled "The effectiveness of riparian fencing in conserving biodiversity" (supervisors: **Michael Douglas** and **Samantha Setterfield**, CDU and **Alaric Fisher**, NTDIPE). Her project is interdisciplinary across social science as well as a biophysical sciences. The social component of her PhD, looking at whether managers think riparian fencing is an effective management tool, is going well. Almost all pastoral managers in the Victoria River District have been interviewed, and although the data is waiting analysis, it appears that major concerns for managers are erosion and control of stock. The biophysical aspect of the project is using birds, ants, and vegetation to investigate if riparian fencing has benefited biodiversity. Study sites have been selected in the Victoria River District and field work is about to commence. As stated above, erosion has been identified as a major concern to land managers in the Victoria River District. This has paved the way for the research being undertaken by **Gillian McCloskey**, a first year PhD student at CDU (supervisors: **Michael Douglas**, **Guy Boggs** and **Bob Wasson**, CDU, and **John Ludwig**, CSIRO). Gillian's project will identify erosion features in the riparian zone, and attempt to quantify what effect riparian management techniques have had on the erosion process. The project will incorporate both short-term field measures, for example of soil physical properties, in addition to a comprehensive historical analysis, primarily through aerial photo analysis. The Landscape Function Analysis method will also be employed to provide an indication of landscape condition. Some GIS data analysis and modelling will also be undertaken. Ideally, field sites will be those selected for the biodiversity research, although it is essential for this project to identify sites that have an extensive aerial photo record. A reconnaissance field trip is about to commence. Both Gill's and Nicole's projects are jointly funded with the Victoria River District Conservation Association.

Michael Douglas

NEWS FROM THE NORTHERN TERRITORY

The Sustainable Futures for Australia's Tropical Rivers Workshop was held in Darwin (Feb. 1-3), organized by Land and Water Australia and CSIRO Land and Water, and hosted by the new look Charles Darwin University (CDU). The meeting attracted about 120 people and was a terrific awareness increasing exercise. The report from this meeting is now available: "Sustainable Futures for Australia's Tropical Rivers: A strategy for developing research directions for Australia's tropical river systems. Outcomes from a forum at Charles Darwin University, 1-3 February 2004-02-04" by Peter Gehrke et al.

The first community consultation process regarding water allocation is underway in the NT. The Government was coerced into going public with their plans through campaign pressure from NGOs and the claytons process continues to be cobbled together in what is a highly unusual way of making decisions. Nevertheless, all sorts of people and disciplines have become involved and some good debates are unfolding. As well as the expected argy bargy. Scientists from the Daly Environmental Flow Initiative studies have been hauled back into the discussion. Their collective recommendations have been adopted in full, which is encouraging, although the difficulty is now trying to deliver those flow rules and guidelines with insufficient knowledge or models about surface-groundwater interactions.

Naomi Rea (CDU) has started a 3 year LWA project on Cultural Values of Water, with partners from the NT Government, Macquarie University Environmental Law School, the Central Land Council and the Desert Knowledge CRC. The project concerns Indigenous knowledge and the significance of water to cultural identity, and looks at ways in having these values and custodial responsibilities as well as traditional and contemporary rights recognised in the way decisions are made about water. Honours projects by **Matt O'Reilly** and **Erin Aucoin-Wenkoff** are assisting in examining the NT Water legislation and the way Indigenous knowledge and values might be recognized.

Keith Ferdinands (Key Centre for Tropical Wildlife Management) is getting close to submitting his thesis on the Impact of *Urochloa mutica* (para grass) on the structure of wetland flora communities, and **Penny Wurm** (CDU) continues her field experiments on the Mary River floodplains looking at germination and establishment of wild rice (Oryza meridionalis) within stands of para grass subject to various treatments.

At CDU, there has been a good deal of recent activity focused around the riparian zones of tropical streams as part of the Tropical Savannas CRC Riparian Health Project. **Ian Dixon** has been employed as a research associate for the project and with **Michael Douglas** and colleagues at ACTFR (JCU) they are developing a robust method for land managers to rapidly assess riparian vegetation condition in northern Australia's savannas-the Tropical Rapid Appraisal of Riparian Condition (TRARC). The TRARC scores simple vegetation indicators from visual ground assessments to derive an index of condition. It is intended that land managers and interest groups with limited time and scientific knowledge will be able to easily assess and monitor the condition of their riparian vegetation.

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No word from the DIPE or eriss mob, maybe next time.

From

Naomi Rea

CENTRE FOR RIVERINE LANDSCAPES GRIFFITH UNIVERSITY, BRISBANE

Michele Burford has been fine tuning some novel methods of algal and bacterial production on Cooper Ck as part of the Dryland Refugium Project. On the same project **Vourn Lutton** has been taking a hands on role in processing fish samples and learning methods for measuring waterhole production.

Visiting academic, **Rick Cunjak**, has been rediscovering what field and lab work means. He is currently processing fish samples for body condition analysis from a recent Cooper Ck field trip. From all reports it is the first time he has had his hands dirty in some time. Keep up the good work Rick! **Nerida Beard**, part time activist, full-time RA has recently left our shores to send a message of hope to refugees on Nauru, as part of the Flotillas of Hope. **Vanessa Fry** is busily completing analysis of stable isotope fractionation coefficients to help to understand the role of phytoplankton in Warrego River food webs before taking time off to give birth to her third child in June. Good luck Vanessa! **Kate Smolders** has recently completed autumn sampling of the Large Rivers Project on the Mary River. Kate will be looking into the application of the Riverine Productivity Model in this system.

Carol Conway has joined the CRL team from Canberra as a research fellow investigating in-stream and riparian zone nitrogen and carbon dynamics in south east Queensland. **Karen McNeale** and **Kim Markwell** have started honours projects recently. Karen is investigating the factors controlling the growth of *Cylindrospermopsis raciborski*, a toxic cyanobacteria in North Pine Dam. Kim is looking at the ecological and landowner values of on farm water storages.

The ASL Queensland Chapter will be having a dinner, drinks and presentation on Tuesday 13th July. The venue is the very swanky new Griffith University Club on Science Rd, off West Creek Road, Nathan campus. Everyone is welcome to join us for dinner from 6.30pm (kitchen closes at 7.00pm) followed by a presentation at 7.30pm. Our speaker will be Professor Angela Arthington who will be presenting *A Perspective on Environmental Flows.*

From

Stephen (Harry) Balcombe

POSTCARD

The 6th Anniversary Postcard from The Free Market .....

It's now coming up to the 6th anniversary of my departure from the world of pointless meetings, monthly reports, cc "everybody" e-mails, and organisational restructures (July 3 is the actual date) and the launch into the BNW (Brave New World) of solo consulting.

It seems an apt time to review what has happened since. There is a common theory that goes around us solo consulting that the 5th or 6th years are critical times. Most solo consultants who go back to regular PAYE jobs do so in the first 5-6 years. If you get past those years, you can generally keep going.

It seems an age since I pointed out in the first ever Postcard from the Free Market (the December 1998 edition, I think - *Eds. Note: aptly named What I do for a Crust(ecan?)* that the BNW looked fearful from the first few weeks. And there were 5 basic fears.

Fear of being under-equipped. At that time (6 years is a long time in technology) there seemed like a lot to setting up a home office. Well, as I sit here, it still looks the same as when I started - there's a computer (the same one, but admittedly with an new super 1000 giga-hectopascal thingo inside - or that's what the guy said in the shop when I wanted more "grunt" to do big hydrological spreadsheet calculations), with a CD burner, and a thin screen (so I don't have to sit on the couch on the other side of the room to let the old CRT thing take up the desk).

There's a phone/fax (same one as I bought to start with - and I guess you younger members will be asking what a FAX is). A printer (recently upgraded to print double-sided - printing one-sided reports was driving me mad, and FinePrint didn't seem to handle tables well). An answering machine (a $29 special that is great - it has a special BS meter built in so if the message goes for too long, it simply cuts it off in the middle, and a series of random beep when it engages, so everyone thinks there are lots of messages).

Only two new pieces of equipment have arrived in 6 years. Yes, I did get a mobile phone. It's a real whiz bang one - I can press a series of numbers on the keypad, and then talk to people. Amazing! No built in camera, internet access, SMS stuff. At last count, there are 4 people who have the number, but don't bother ringing it. It's off and usually discharged. I take it on trips, just in case I need to talk to you.

And a change from dial-up to ADSL internet connection. That's a blessing and a nuisance. The speed means that getting information on the net from a wide variety of sources over a short time is possible (try downloading large files on dial-up), but it means that the consumption of coffee and rest breaks has plummeted (try getting up and making a coffee and having a wander in the back yard in the 2.5 nanno-seconds it takes to download large files).

But it does mean having to get virus checkers, firewalls (there are intrusion alerts about every day), anti-spam filters and anti-spyware programs to buy and understand and keep updated.

But all in all - not much has changed, and nothing new has come up to make the office equipment requirements any different from 6 years ago.

Fear of poverty. At last count, there were 3 weeks when I had no job on the books. At one stage there were 13 on the go at the one time. Not that any of these are full time - some were a few days, some were on-going for months that took a day a week on average. But apart from the 3 weeks, there was always a cheque coming somewhere in the future (and an awful lot of cheques "in the mail" that seemed to take a while). But poverty - no.

Fear of lack of information. The lack of access to a library was a problem at the start. Projects over the first year or two were dotted with the same old references, so you could pinpoint my leaving date by plotting the reference list. But now, the grey literature is mostly on-line. Most relevant journals now send me contents updates with abstracts freely accessible, and you can buy individual articles. Just Google your latest project title and there will be 2,456 available "references" to any subject. But best of all, there is a wonderful trend towards "Expert Opinion" as a part of a lot of projects. So you just make it up!

Fear of isolation. That's still the hardest one. About three times in 6 years, the lack of day-to-day human contact with colleagues almost drove me back to work. Then I went and visited a few workplaces to see these humans, and they tended to be depressed, harried, over-worked and complaining. That cured those few incidents quite quickly. Now, I have meetings on average once a fortnight, go on occasional field inspections and field days, talk on the phone a bit, and (best of all) go to the ASL conference every year. So although that part of the work is not perfect, it is perfectly acceptable (except that I am starting to ask the dog how to spell words .... Is that a problem?)

Fear of becoming a consultant. There's an old joke - slightly modified. "Once I couldn't spell consultant, now I are one". Now, with Word 2002, you can't even misspell it!
I think after 6 years, none of those initial fears have come to much. I'm still enjoying the work and the lifestyle (except I've only had about 4 weekday games of golf in the six years). No doubt, after reading this, you will be rushing off to some meeting or whatever. I think I will go and watch the tape of the best new show on TV. Now that "Iron Chef" has finished for now, check out "Late Night Poker", Thursday, 10.30 on SBS.

Yep, I think I might just keep going with this consulting caper.

Just one last thing. I will always remember after that first postcard explaining these fears, Bill Williams came up to me at some workshop and sat me down and explained all the good things about being a consultant. I will always remember his sage advice. I'm sorry I never got a chance to thank him properly.

Tim Doeg

A BIT OF FUN ~ KEEP THOSE LETTERS COMING !!

Ask Onmil all the tricky limnological etiquette questions you really want answered!!

Dear Onmil

Please stop writing, you make me laugh and spill things and I wet myself.

Signed

W. Pants

~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Dear W.

I'm to blame for your incontinence????? Let's not go there, I hardly know you.

Incontinence is no handicap for a limnologist. After all, you're going to get wet rather frequently anyway. Most of the rest of the time you'll be sitting down, putting specimens and students under the microscope, or driving to your study sites.

Have an office near the toilets. Better still, have an ensuite put in. Call it a wet lab.

In the field, it's even easier. Wear waders, go for a walk in the wetland, creek or river of choice. If you have to tip out any suspicious moisture at the end, just say "I really must get some new waders, these have a leak". No-one will suspect what sort of leak.....

Sincerely

Onmil

(Editors Note: a few members have asked how to contact Onmil, please send to me and I'll pass on your request). Ask Onmil all the tricky limnological etiquette questions you really want answered.....
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DEDICATION OF DAVID MITCHELL WETLANDS

Ceremony held at Charles Sturt University, Thurgoona ~ Thursday 13 May 2004

DAVID MITCHELL WETLANDS

Professor David Mitchell has had a distinguished career devoted to scientific discovery, particularly in the areas of conservation and management of wetlands and water plants. In 1999 he received the President's Award from the Aquatic Plant Management Society in recognition of his international contribution to Aquatic Plant Biology and Control. In 2003 the Society of Wetland Scientists (USA) named him their International Fellow for that year in recognition of his lifetime contribution to wetland science.

Professor Mitchell has written over 220 publications. These include two books and 87 papers in refereed international journals or as book chapters. His book on "Aquatic Vegetation and its Use and Control", published by UNESCO in 1974, formed the basis for national programs for managing water weeds in several countries, while his 1978 publication "Aquatic Weeds in Australian Inland Waters" contributed to the Australian national approach to the management of water weeds.

Photo credit:
Richard Williams
"The Cracked Lens"

Professor Mitchell was appointed as an Adjunct Professor with the School of Environmental and Information Sciences (SEIS) in 1995, after retiring as Foundation Director of the Murray Darling Freshwater Research Centre. One of Professor Mitchell's major undertakings, since his honorary appointment to Charles Sturt University, has been his collaboration with Marci Webster-Mannison in the formulation of procedures and the development of systems for the new campus of Charles Sturt University at Thurgoona, Albury, in accordance with principles that emphasise the conservation of natural resources and energy.

Surface run-off is being captured, stored and recycled; dry composting toilets were installed throughout; and intermittent-flow artificial wetlands are treating grey water successfully. In 1999, this work received the award for Best Practice Water Cycle Management from the NSW Branch of the Australian Water and Wastewater Association and a Rivercare Gold Award from the NSW Department for Land and Water Conservation. In 2000, it received another Rivercare Gold Award to recognise outstanding achievement in Stormwater Management and Landscape in Tertiary Education.

The University has named a group of wetlands (300m north of the SEIS buildings on the Thurgoona campus) after Professor Mitchell, in recognition of his outstanding efforts for the University, the community and the environment. The "David Mitchell Wetlands" are valuable habitat for wildlife and macrophytes and a continuing example of the difference one person can make to environmental conservation.

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Response from David Mitchell:

"I was humbled to learn that the University Council had resolved to name the series of wetlands on the north of the Thurgoona Campus the "David Mitchell Wetlands". I would be delighted to accept this singular honour. Please convey my sincere thanks to all those associated with moving the resolution in the University Council.

It has been a great pleasure and a source of personal pride to be associated with the University and particularly with the development of the Thurgoona Campus, since my retirement from CSIRO in 1995. It has afforded me opportunities to continue academic pursuits and to put into practice some of the results arising from several decades of research carried out on wetland systems and aquatic plants, mostly in Africa and Australia. Such opportunities are relatively rare for retired academics and my gratitude to the University for them cannot be adequately expressed.

However, as is the case with most, if not all, such academic pursuits, much of the body of this work has been achieved in collaboration with others and it is important that I acknowledge the significance of their contributions. I have had the great good fortune to experience the stimulation of such collaboration through my career, and especially in this University. In accepting this honour, I must also pay tribute to the colleagues with whom this work has been shared.

Professor David Mitchell
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INFORMATION FROM AND FOR MEMBERS

Please Refer to the ASL Website Updates / Newsflash! Section

AWA NEWS

For a short weekly update on water issues, you may wish to join AWA News. For a FREE subscription to the AWA News, register at: http://www.awa.asn.au/Nsiq/news/form.asp

The Wetlands Centre Series

The Wetlands Centre Series: Innovations, Obligations and Incentives Tuesday 21st September 2004 The Wetlands Centre Australia is launching the first national forum in an annual series on innovations in wetland management. The forum will focus on:

A. Providing access to cutting edge approaches to managing activities in wetland catchments.
B. Interpretation and update on all significant legislation and reforms affecting wetlands in NSW.
C. Economic implications and incentives for sustainable management approaches.

It is designed to challenge current thinking and practice. It will provide direct access to new and fresh knowledge, tools and technology, and contact with specialists from across Australia. Organisations and individuals are invited to submit a proposal for presentation at the inaugural wetland forum. The deadline for submissions is Wednesday 30th June 2004. For more information about the forum and the call for presentations go to The Wetlands Centre's website using the link: http://www.wetlands.org.au/forum.htm

Australia's first online water market

Water trading across the country is set for a new era with Australia's first online water market...http://www.abc.net.au/rural/news/stories/s1092618.htm. The website is up and running - http://www.waterfind.com.au/

MDB Ministers clear path for LIVING MURRAY Implementation

On 26 March, the Murray-Darling Basin Ministerial Council decided on a clear path forward for the Living Murray initiative for the rest of 2004. In a communiqué issued at the end of a one-day meeting in Sydney, the Council agreed that the Australian, State and ACT governments should identify approaches and priorities to "facilitate the expeditious implementation of the Living Murray Initiative" by 31 May. The full text of the communiqué is available at www.mdbc.gov.au/news_room/media_release/mc-25mar04.html along with a number of related fact sheets and background papers.

New MDBC publication explains how River Murray is 'managed'

A new MDBC publication explains the historical background to the building of the vast infrastructures of dams and weirs on the River Murray. The new brochure "Managing the Murray" also describes how River Murray Water engineers work closely each day with State authorities to regulate the river's flow and ensure reliable water supplies to farmers and urban dwellers along its entire length. Copies of the brochure are available from the MDBC. Phone: 02 6279 0141, fax: 02 6248 8053, email: info@mdbc.gov.au

UN Water Conference summaries now online

A summary of key issues raised in the 11 workshops of the 2003 United Nations Association of Australia National Water Conference held in Melbourne recently are now available online.

The conference, "Towards a National Water Policy Framework: Vision to Implementation' attracted more than 100 delegates from the water industry. They shared views on a range of issues relating to a national water policy. A series of MS Powerpoint slides presented at the conference are also available online, see www.mdbc.gov.au/whatson/news/wateruse/new_UN_water_con.html

New website explores biosalinity solutions

A new American-based website is dedicated to promoting awareness of, and exploring solutions to, the pressing problems of salinity in the environment. Set up by the Biosalinity Awareness Project which claims to be an independent, non-profit organisation, the site is a rich information resource. It includes extensive listings of useful salt-tolerant plants, current halophyte research and development, and germplasm/seed sources and links to relevant books, articles, news, and interviews. For more information email info@biosalinity.org or go direcetly go the site at www.biosalinity.org/

MDBC Native Fish Strategy released

The Murray-Darling Basin Commission (MDBC) has publicly released the Native Fish Strategy 2003 - 2013 (NFS) and will now provide feedback to the communities who made valuable contributions during its six-month consultation phase. The Strategy is a working document that will guide the management, protection and rehabilitation of native fish populations and their habitats within the Murray-Darling Basin for the next 10 years. For more information contact: Allison Hicks on 02 62790129, email: allison.hicks@mdbc.gov.au

Lake Mulwala Management Plan to be finalised this year

A plan to sustainably manage Lake Mulwala for the benefit of all users would be finalised this year, according to River Murray Water General Manager David Dreverman. Formed by the Yarrawonga Weir, Lake Mulwala was created to regulate water for irrigation. It is also a valuable tourism and recreation asset for sailing, water skiing and fishing. For more information contact: David Dreverman, General Manager, River Murray Water on 02 6279 0100.

First Indigenous Basin Gathering attracts 30 nations

The Murray-Darling Basin Commission's first ever "Our Water, Our Land, Our Life, Indigenous Basin Wide Gathering" at Old Parliament House on May 19-21 has attracted representatives from 30 nations. The MDBC has organised the event as part of its the Murray-Darling Basin Indigenous Action Plan which aims to establish meaningful partnerships between Indigenous peoples within the Basin. For further information contact Karen Demmery on 6279 0124 or karen.demmery@mdbc.gov.au or the MDBC's Integrated Catchment Management unit on 6279 0100.

New MDBC tool measures water trading impact on salinity

The Murray-Darling Basin Commission has developed a new computer modeling system to measure the effects of new irrigation development due to water trading on River Murray salinity levels. The main purpose of SIMRAT - which stands for Salinity IMpacts Rapid Assessment Tool - is to allow the MDBC to calculate downstream environmental and economic salinity impacts due to new irrigation in the Mallee Zone. For more information contact Matt Kendall, Salinity Manager, MDBC on 02 6279 0100

Natural Resource Management Ministerial Council

Federal and state government ministers from across Australia met in Adelaide in April to exchange ideas on regional natural resource management, especially implementation of the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust. For more information and a complete copy of the communiqué they issued at the end of the meeting go to www.affa.gov.au/ministers/truss/releases/04/nrmmc604.html

NSW Irrigator's Council Media Release National Water Reform 8 March 2004

NSW Irrigators' Council reaffirmed its support for and commitment to the COAG National Water Initiative and calls on all governments to stay the course and ensure early ratification of the Inter-Governmental Agreements required to give effect to the proposed reforms. For full release see: http://www.nswirrigators.org.au/pdf/press_release/National%20Water%20Reform.pdf

Project completed

The project "Assessment of ecological risk associated with irrigation > systems in the Goulburn Broken catchment - Phase 2" has recently been completed. Phase 2 examined two of the identified risks (blue green algal blooms and fish survival) in detail. Work was undertaken by the Water Studies Centre at Monash University, supported by funding supplied by the National Program for Sustainable Irrigation (NPSI) (of Land and Water Australia) and Goulburn-Murray Water. The Goulburn Broken project is complemented by work being undertaken in the Fitzroy River (Qld) and the Ord River (WA). Work in these three catchments is being coordinated by researchers from Monash and Melbourne Universities.

The Goulburn Broken project has generated a substantial body of work. Summaries and detail are available on request. Earlier reports, and other relevant information can be found at http://www.wsc.monash.edu.au/sresearch.htm

Australian Water Bugs: Their Biology and Identification

The work of two scientists over the last decade has almost doubled the number of described Australian semi-aquatic bug species. With an estimated two thirds of Australia's insects yet to be scientifically described, documenting and recording new species is no easy task. Identifying the new species of semi-aquatic bugs saw Tom Weir, CSIRO Entomology, and Nils Andersen, Copenhagen University, examine more than 45,000 specimens from around Australia.

The 58 new species of semi-aquatic bugs they discovered and described adds to our knowledge of Australia's biodiversity and increases the pool of knowledge about the world's insect species. Water bugs are a key part of aquatic ecosystems and also provide benefits to humans since many species prey on mosquitoes and are themselves a food source for fish. In some cases water bugs can prove useful in monitoring the quality of some aquatic environments.

Australian Water Bugs: Their Biology and Identification is the first comprehensive book about Australian water bugs and is now available from CSIRO Publishing. The authors, Tom Weir and Nils Andersen, have collected and studied water bugs in Australia's diverse aquatic habitats for a combined 80 years. Copies are available by contacting CSIRO Publishing on either: 1300 788 000 (toll free in Australia); +613 9662 7666, email: publishing.sales@csiro.au; or by visiting: www.publish.csiro.au

Fighting Salinity – new review points the way ahead

Australian Agriculture Minister Warren Truss has welcomed the release of a report that analyses salinity mapping techniques and highlights practical and effective ways of tackling salinity.

Mr Truss said the *Review of Salinity Mapping Methods in the Australian Context*, which was undertaken jointly by the Academy of Science, and the Academy of Technological Science and Engineering, represents a major step forward in understanding and managing salinity. See Media Release at the following web site: http://www.ndsp.gov.au/45_media_centre/15_media_releases/fighting_salinity.htm

National Chemical Information Gateway (not really limnological – but worth the look)

See http://hermes.erin.gov.au/pls/cig_public/!CIGPPUBLIC.pStart for further information.

Flora of Australia online (Neither is this, but maybe of use)

This searchable database - not an electronic book, is available at http://www.anbg.gov.au/abrs/abif/flora/main-abif-query-styles.html

New members of the Murray-Darling Basin Community Advisory Committee

See http://www.affa.gov.au/ministers/truss/releases/04/04108wt.html

"Improvisation of Lake Metabolism through Treatment Compartments"

I recently received a summary from a person from India who has recently completed their research work for a Doctorate in Limnology on World famous Dal Lake in Kashmir, India, titled "Improvisation of Lake Metabolism through Treatment Compartments". The capability of macrophytes to remove pollutants by directly assimilating them into their tissues has been exploited in the present investigation. *If anyone would like a copy of this summary please contact the Editor.*

Welcome to the Water Innovation Network (WIN)

This monthly email of WIN, provides an evolving service of contacts, events, issues and research information within the water industry. Want to Subscribe? Email your details to m.koerber@aitec.edu.au

Worldwide Search for Innovative Projects

Australian entries are now being sought for the 2006 Rolex Awards for Enterprise. The Awards for Enterprise were created in 1976 to support groundbreaking projects in science and medicine; technology and innovation; exploration and discovery; the environment and cultural heritage. Five winners - the Laureates - will be honoured at a ceremony in Singapore in October 2006. They will each receive US$100,000, a specially inscribed gold Rolex chronometer and international publicity for projects that meet the programme's criteria: originality, feasibility and potential impact. The deadline for applications from Australia, Asia, the Pacific and North, Central and South America is: May 31, 2005. Prospective entrants can complete the official application form available on the Rolex Awards website - www.rolexawards.com

Land and Water Australia 2005-06 Innovation Call

Land & Water Australia is changing the emphasis of its former annual General Call for R&D projects to high innovation. This change is to balance its primarily applied R&D program funding with some "blue sky" research. While we will continue to maintain a strongly applied portfolio, this Innovation Call is explicitly seeking higher risk and potentially higher return projects. High risk refers to less certainty in achieving outputs and outcomes.

We are actively pursuing genuine new ideas, concepts, processes and/or creative ways of utilising existing knowledge and generating new knowledge to improve the sustainability of Australia's rural landscapes and industries. For an application form and more information about the Innovation Call go http://www.lwrrdc.gov.au/funding.asp

National Reserves System Program

Copy of covering letter from ASL submission to the consultation paper on the directions of the National Reserves System Program.

Date: *1 April 2004*

From: The President (Assoc. Prof. Andrew Boulton),
on behalf of The Executive of the Australian Society for Limnology
The Australian Society for Limnology Inc.
11 Nicholson Street, Carlton VIC 3053

To: National Reserve System Taskforce
c/o National Reserve System Section
Parks Australia South Branch
Department of the Environment and Heritage
GPO Box 787
Canberra ACT 2601

Commonwealth of Australia (2004) *Directions for the National Reserve System - A Partnership Approach. Prepared by the National Reserve System Taskforce of the NRM Ministerial Council's Land, Water and Biodiversity Committee.* Department of the Environment and Heritage; Canberra.

SUBMISSION

Congratulations on a comprehensive review of the directions of the National Reserve System (NRS). Our purpose in making this submission is essentially to support your initiative in highlighting the conservation of freshwater ecosystems within the NRS.

We refer particularly to the proposed directions statement No.10:

10. Freshwater Ecosystems	
Action: Review the current understanding of freshwater biodiversity in relation to CAR and to finalise an agreed approach, which may include future amendments to the NRS Scientific Guidelines, to ensure freshwater ecosystems are appropriately incorporated within the NRS.	*Responsibility*: NRS Scientific Advisory Committee augmented with appropriate freshwater scientists. *Timeframe*: by 2004.

In brief, the points we wish to make in relation to this initiative are:

- we strongly support the proposal;
- we believe the timeframe should be extended to 2005;
- we believe it is essential to acknowledge the existing policy background in developing terms of reference for work on this issue by the Committee; and
- we wish to make a number of detailed suggestions (see Attachment One) relating to the inclusion of freshwater protected areas within State and Commonwealth reserve systems.

Issues in more detail

The Australian Society for Limnology (ASL) is in the process of developing an organisational policy statement on freshwater protected areas. While it will take some weeks to finalise this document, much of the discussion contained in Attachment One will appear in the policy document. The document, broadly, is supportive of the new NRS initiative regarding freshwater protected areas.

While we are extremely pleased to see the conservation of freshwater ecosystems highlighted within the NRS directions statement, we believe it would be a mistake to attempt to resolve the issue with undue haste. We suggest a timeframe of 2005 is more realistic than 2004.

Australia's Commonwealth Government and all jurisdictional governments are already committed to the establishment of systems of protected areas containing representative example of all major ecosystem types, including freshwater ecosystems. It is most important that this policy background be acknowledged within the terms of reference established for further work on this issue by the Committee.

The InterGovernmental Agreement on the Environment 1992 is a key document in this respect, and Nevill and Phillips (2004[i]) have detailed further policy commitments by the various jurisdictional governments.

Recommendations contained in Attachment One:

There is a small number of urgent issues.

Firstly, although some representative examples of freshwater ecosystems are contained within existing protected areas, no systematic national review has been conducted to identify gaps in the reserve network. It is likely that many freshwater ecosystems are not adequately protected – particularly those of riverine or subterranean nature.

Secondly, although all jurisdictions are developing inventories of freshwater ecosystems, these remain incomplete. Nowhere are they comprehensive in the sense of containing up-to-date data on value, condition and threat over wetlands, rivers and subterranean ecosystems. The acceleration of work on inventories is urgent to underpin both protected area gap analysis studies and development of regional NRM strategies.

Thirdly, river degradation is ubiquitous and increasing over much of temperate Australia; the identification and protection of remaining rivers of high conservation value is urgent. In all three areas, the Commonwealth needs to play a leading role, particularly with respect to promoting and funding inter-State working groups to address these issues in a coordinated way.

Recommendations are made in Attachment One. These recommendations, in brief, seek to:

- support accelerated development of comprehensive ecosystem inventories by the States, within a framework which would allow development of a national inventory;
- use this inventory, supported by an 'interim freshwater bioregionalisation of Australia', to identify and seek to remedy gaps in the protected area network through the development of a comprehensive, adequate and representative national system of freshwater protected areas; and
- identify and protect rivers of outstanding conservation value, partly through existing mechanisms such as those associated with the Ramsar convention, as well as new mechanisms, perhaps modeled on the Canadian Heritage Rivers System.

Please Note that this letter and Attachment One are on the ASL website.

FASTS

Commonwealth Legislation

There is no major legislation affecting science, R&D and research policy currently before the Parliament.

It is expected the Government will announce BAA2 on budget night. Apart from some additional appropriations (which are never blocked by ALP and Democrats in the Senate) it is unlikely BAA2 will generate much legislation (most decisions, such as anticipated changes to the Research Training Scheme (RTS) are likely to be administrative, not legislative).

The following Bills may be of interest to some Member Societies

Industry, Tourism and Resources Portfolio

Industry Research And Development Amendment Bill 2003
This Bill removes the existing powers of the Industry Research and Development Board (IR&DB), to commit, approve or recommend the expenditure of Government funds for R&D.

These funding functions are currently undertaken by the Department not IR&DB, so the effect of the Bill is to bring the IR&D Act (1986) into conformity with actual practice.

This Bill makes no changes to the duties and powers of the IR&DB on R&D tax concessions and clarifies the role of the IR&DB on assessments of proposals for R&D or innovation funding, and evaluating the progress of projects approved for funding.

The activities of the IR&DB are of considerable interest to FASTS. However, this legislation is not controversial as it confirms status quo rather than changing its role.

Bill status: Passed: 4 March 2004.

Education, Science and Training Portfolio
Higher Education Support Amendment (Abolition of Compulsory Up-front Student Union Fees) Bill 2003

Seeks to abolish compulsory student association fees. Will almost certainly fail in the Senate. If it were passed it would seriously damage the resource base of CAPA (a FASTS affiliate member) and other student organisations, notably postgraduate associations, who do provide a range of services, representation and advocacy to students including science, mathematics and technology students.

Bill status: Introduced into House. Not debated in either chamber.

Agriculture, Fisheries and Forestry Portfolio

Agricultural and veterinary chemicals (administration) amendment Bill 2004.

Designed to bring Australia's regime for management of chemicals into line with the Stockholm and Rotterdam conventions (the Government announced last August that it intended to ratify these two conventions).

Further information: http://parlinfoweb.aph.gov.au/piweb/browse.aspx?NodeID=40

Bill status: Passed: 4 March 2004.

Dairy Produce Amendment Bill 2003
This Bill tidies administrative arrangements, clarifies indemnity and liability issues and liberalises financial constraints on Dairy Australia Ltd (which superceded the Australian Dairy Corporation and the Dairy Research and Development Corporation).

Bill status: Introduced into House. Not debated in either chamber

Fisheries Legislation Amendment (Compliance And Deterrence Measures And Other Matters) Bill 2003

The Bill seeks to;

- put in place more effective deterrence and compliance regimes to help deter foreign fishers from illegally fishing in Australian waters;
- improve the operating efficiency and effectiveness of Australian Fisheries Management Authority (AFMA) in its management of Commonwealth fisheries resources;
- and promote ecologically sustainable practices in Commonwealth-managed fisheries.

Bill status: Passed Senate, to be debated in House.

Health and Ageing Portfolio

Industrial Chemicals (Notification And Assessment) Amendment (Rotterdam Convention) Bill 2004

Gives effect to Australia's obligations under the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. It establishes a system of notification and assessment of industrial chemicals to protect health, safety and the environment and extends the present notification, information exchange and information gathering powers.

It will have some financial and process impact on exporters of industrial chemicals.

Bill status: Passed 4 March 2004

Environment and Heritage Portfolio

Renewable Energy (Electricity) Amendment Bill 2002

Proposed raft of essentially administrative changes to Mandatory Renewable Energy Target (MRET) scheme. The Bill was defeated in the Senate becoming, in effect, a proxy for debate over the MRET rather than the Bill's provisions per se. Government unlikely to bring the Bill back in its current form (they attempting to deal with some of the provisions administratively rather than legislatively).

In the interim, there has been a Government review of the MRET (The Tambling Report) which was released on 16 January 2004. The report is available at www.mretreview.gov.au

Bill status: Passed in House. Blocked in Senate. Can be reintroduced.

Great Barrier Reef Marine Park Amendment Bill 2004
Clarifies that GST is not payable on the Environmental Management Charge levied on standard tourism.

Bill status: passed 9 March 2004.

Treasury Portfolio

Energy Grants (Cleaner Fuels) Scheme Bill 2003
Energy Grants (Cleaner Fuels) Scheme (Consequential Amendments) Bill 2003

The Energy Grants (Cleaner Fuels) Scheme provides a generic framework for the payment of grants for the importation and manufacture of cleaner fuels in accordance with the Government's 2003-2004 Federal Budget announcement concerning fuel tax reform and cleaner fuel measures.

The EG(CF)S will initially allow for the payment of a grant for the importation and domestic production of final fuels containing biodiesel. The grant will offset the excise and customs duty payable on biodiesel and continue the current effective excise rate of zero for 100% biodiesel until 30 June 2008. The grant will also be payable on fuel blends containing biodiesel, extending an effective excise rate of zero to the biodiesel component of fuel blends.

The Bill also provides grants to offset excise and customs duty on the manufacture and importation of ethanol when the existing subsidy arrangement finishes on 30 June 2008.

The legislation is controversial within the Coalition - the Nationals unhappy with elements relating to ethanol and, thus, effects on sugar industry.

Bill status: Passed in House, introduced into Senate but Govt yet to bring on debate due to internal disputes.

Current Senate Legislation Inquiries

- Revised Draft Import Risk Analysis for Bananas
- Revised Draft Import Risk Analysis on Apples
- Draft and Final Import Risk Analysis for Pig Meat
- Import risk assessment on New Zealand apples

Further information: http://www.aph.gov.au/senate/committee/rrat_ctte/index.htm

Current Senate References Inquiries

Australian Plantation Forestry
Senate Rural and Regional Affairs and Transport References Committee

Terms of reference include;

- whether there are impediments to the achievement of the aims of 'Plantations for Australia: The 2020 Vision' strategy;
- whether there are further opportunities to maximise the benefits from plantations in respect of their potential to contribute environmental benefits, including whether there are opportunities to:
- better integrate plantations into achieving salinity and water quality objectives and targets,
- optimise the environmental benefits of plantations in low rainfall areas.

Report due for tabling 11 March 2004

Rural Water Resource Usage
Senate Rural and Regional Affairs and Transport References Committee

Terms of reference include;

- current rural industry based water resource usage; and
- options for optimising water resource usage for sustainable agriculture.

Report due for tabling 24 June 2004.

Bradley Smith
Executive Director
FASTS

24th March 2004 MEDIA RELEASE 05/04

$450 Million Squeeze On Universities Distorts Research Balance

FASTS has welcomed the release today by Minister Nelson of three key reports on Australian research[1].

The President of FASTS, Professor Snow Barlow said a key finding of the report *Evaluation of Knowledge and Innovation* was the total funding leveraged out of universities to participate in competitive ARC, CRC, NHMRC and Major National Research Facilities (MNRF) programs was estimated to be more than $450 million in 2003-4.

"Universities must provide top-up funding or matching dollars to access competitive programs. FASTS believe the magnitude of this leverage seriously impedes the capacity of universities to invest in infrastructure, early-career researchers and strategic research priorities.

"The primary source of funds to support university strategic priorities, are block grants. However, the leveraging of $450m distorts the balance of research funding in favour of competitive grants.

"Today, Minister Nelson publicly supported retention of the current balance of block grants and competitive funding. "FASTS calls on the Minister to ensure the balance is real by ensuring ARC, NHMRC, CRC and MNRF funding is adequate to cover the actual costs of competitive research programs. "There is greater emphasis in competitive programs on short term commercial outcomes as distinct from public-good basic and strategic research. "Leveraging $450m out of universities structurally disadvantages public-good research with long term horizons.

"FASTS endorses a common theme in the three reports that there is a need for greater investment in Australian R&D and innovation. Maintaining the status quo is not acceptable as that will be a decline relative to competitor OECD countries.

"The case to substantially build on *Backing Australia's Ability* in this year's budget is compelling. Any loss of impetus will be a serious setback for Australia's future capacity to generate wealth and successfully manage environmental and social challenges, concluded Professor Barlow.

Media Inquiries: Bradley Smith (0408) 511 261

[1] *Review Of Closer Collaboration Between Universities And Major Publicly Funded Research Agencies, The Final Report Of The National Research Infrastructure Taskforce* and *Evaluation Of Knowledge And Innovation Reforms Consultation report.*

Gaps in Federal-state jurisdiction **28 May 2004**

I am compiling a list of science informed policy areas where there are conflicts/gaps/tensions between Commonwealth - State (and local council) jurisdiction which impacts on the capacity to develop good policy and administration.

Obvious examples are water management of the Murray-Darling, management of coastal waters and gene technology.

I would be grateful if Societies can nominate any other areas where jurisdictional conflict is undermining good policy. I want to develop a hit list of issues where we can lobby for administrative changes to enable better science informed policy.

In addition, if there are good examples of the Commonwealth and States working together to address particular issues that would also be useful to know so that we can offer some good models as well.

If people can forward some brief details to me at fasts@anu.edu.au it would be much appreciated.

Cheers
Bradley Smith
Executive Director
FASTS

BOOK REVIEW

The Lakes Handbook: Volume 1; Limnology and Limnetic Ecology.
Edited by P. E. O'Sullivan and C. S. Reynolds.
Published by Blackwell Science Ltd. Oxford, 2003.
ISBN: 0-632-04797-6(Hardback)
Price: £125.00

As stated by the editors, this book sets out to emulate the well known *Rivers Handbook* (Calow and Petts 1992) by endeavouring to review current scientific knowledge about the physical, chemical and biological characteristics of lakes. It aims to "provide a report that brings together the most recent perspectives" (p.1) on the development and functioning of lake systems. With these aims the editors set themselves a challenging task, as such a book risks falling between the detailed information provided by specialist publications and the broad introduction to fundamental issues presented in text books. As with any good review a key objective is to identify knowledge gaps. But the uniqueness of a publication such as this relies not only on its ability to draw out from a concise summary the major research themes challenging progress within particular disciplines, but also its success in providing an overview of their importance at a system scale. This would set the book apart from a general text while providing a wider context than the specialist review. Perhaps this is expecting too much, but it does provide some yardstick against which to gauge the contribution of this new book, and there are indications within the text that this was at least part of the aspiration for its production. Indeed the title of the first chapter, "Lakes, limnology and limnetic ecology: towards a new synthesis" (Reynolds), suggests as much.

Thankfully the editors were not tempted to differentiate the book through a convoluted arrangement of material and the contents are set out in a rather "traditional" but logical way. Beginning with "The Origin of Lake Basins" (Löffler) the contents progress through chapters describing physical and chemical conditions including "The Hydrology of Lakes" (Winter), "Chemical processes regulating the composition of lake waters" (Stumm), "The motion of lake waters" (Imboden), "Regulatory impacts of humic substances in lakes" (Steinberg) and "Sedimentation and lake sediment formation" (Bloesch).

The next chapter entitled "Organisation and energetic partitioning of limnetic communities" (Reynolds) seems somewhat out of place, but it is argued that it sets a general context for the following seven chapters that deal with the limnetic biota. These chapters follow a functional classification and include "Phytoplankton" (Padisák), "Aquatic plants and lake ecosystems" (Pokorný and Květ), "Benthic invertebrates" (Jónasson), "Pelagic microbes-protozoa and the microbial food web" (Weisse) and "Zooplankton" (Gliwicz). Two chapters deal with fish ecology, "Fish population ecology" (Winfield) and "Fish community ecology" (Sarvala, Rask & Karjalainen), while the final two chapters provide integrated views of system functioning perceived from community dynamics in "Self regulation of limnetic ecosystems" (Pahl-Wostl) and from reconstructed historical changes in "Palaeolimnology" (O'Sullivan).

This comprehensive list of topics, along with the expressed aim of the editors to bring together the most recent perspectives, holds great promise that the book presents a compendium of current knowledge. Although this is successfully achieved in many chapters, others fall somewhat short of these goals. In common with other ambitious projects of this type, unforeseen difficulties resulted in an extensive delay in publication of the book. As a result some chapters have six year old papers as their most recent references while others contain references as recent as 2003. For some readers this may be disappointing, especially if it is their field of interest that has not been updated. For those accessing the book to revise information on fields less well known to them this problem is not so critical. However, there is also a wide variation in detail and coverage between chapters. This is often the case in multi-authored, edited books where the style, perceptions and motivations of the different authors vary widely. In some chapters the style is more like that of a text-book and the material provides a general overview of the subject, whereas in other chapters a greater attempt is made to identify major research directions and to discuss their implications.

Despite these foibles, the reviews are in general very good, as might be expected from the many respected scientists who have contributed, and I would recommend that you look at this book. I particularly enjoyed the chapters on hydrodynamics, the regulatory impacts of humic substances, energetic partitioning of limnetic communities, pelagic microbes, and self-regulation of limnetic ecosystems. These all provided new ideas, but this choice undoubtedly reflects my interest in lake and river metabolism. In my view this book is particularly useful as a starting point for those wanting to access unfamiliar areas of lake research, and also as a check on content for those delivering lectures on lake limnology.

Reviewer: Rod Oliver (rod.oliver@csiro.au)

BOOK SUMMARIES

The Stream Health Manual

Pine Rivers Shire Council (neighbouring shire to Brisbane City, Queensland) is publishing a book on *The Stream Health Manual*. I would like to put this summary of The Manual into the ASL newsletter.

I am the senior author, consultant to PRSC and authorised by Council to send you the text below for publication.

Kind regards
Ulrike
Applied Freshwater Science
1166 Caboolture River Road
Rocksberg Qld 4510
phone: 07 54 970 074
e-mail: afs@mail.cth.com.au

The Stream Health ManualM by **U. Nolte** and **P. Loose**
A Pine Rivers Shire Council Publication, Qld, 40 pages, May 2004

The manual presents a set of nine stream health indicators (biological, physical and chemical) and their levels (numerical concentrations or statements) to protect identified environmental values. his set of indicators provides a multi-metric tool that best measures the ecological condition of freshwater streams in the Pine Rivers Shire and similar areas in south east Queensland and northern New South Wales.

The manual is a pioneering work in using indicator levels of high sensitivity (high resolution power) applied to seven stream health classes (following the saprobity system) for 132 sub-catchments identified for management needs in the Pine Rivers Shire. tream health classes are based on biological variables - focused on macroinvertebrate communities analysed to species level - and backed by physico-chemical data.

The manual consists of four parts: Part 1 presents the stream health vision for the Pine River Shire juxtaposed with the current state of its streams (translated into stream health maps). Part 2 outlines the strategy on how to achieve the vision in which the indicators are measurable benchmarks. Part 3 explains and justifies the selection of the nine stream health indicators, specifies indicator levels (objectives and upper limits per target stream health class) and briefly discusses the given levels to put them into a regional perspective. Part 4 describes the seven stream health classes using photos along with a condensed text.

The manual will greatly assist the assessment of stream health classes in streams in south east Queensland and north New South Wales. The indicator levels provided represent measurable benchmarks of desired environmental outcomes against which management of land and water must perform. Such standards are necessary to develop and implement stream management strategies and policies, state and local, and to evaluate their effectiveness. Such measures include the new planning scheme prepared under the *Integrated Planning Act* (IPA 1998), the *Environmental Protection [Water] Policy* (Qld EPA 1997) and *Urban Stormwater Quality Management Plans* (Qld EPA 2001).

The manual is available from Pine Rivers Shire Council for a fee of $30.00 per copy. To order your copy please contact Peter Loose, Manager Environmental Services Department, (07) 3480 6646 or peterlo@prsc.qld.gov.au.

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Conservation of freshwater ecosystems

The Australian Freshwater Protected Area Resourcebook:
the policy background, role and importance of protected areas for Australian inland aquatic ecosystems

Editors
Jon Nevill
Ngaire Phillips

for the
Australian Society for Limnology
Representative Reserves Working Group

1 March 2004

OnlyOnePlanet.com.au

ISBN 0-646-43256-7

This 265 page A4 format book is available free of charge in electronic form (see reverse page). It will be printed in hard copy in late March 2004. Copies can be purchased at a cost of $25 each, plus $15 postage and handling (Australian dollars: prices apply to customers within Australia only).

Tax Invoice

Supplier: Jon Nevill, OnlyOnePlanet Australia, 31 Coolabah Road, Sandy Bay, Tasmania 7005
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Send this tax invoice, together with a cheque made out to Jon Nevill, to the address above; alternatively send an order without payment and pay later against a tax invoice which will be mailed with the order.

The Australian Freshwater Protected Area Resourcebook:
the policy background, role and importance of protected areas for Australian inland aquatic ecosystems. 265 pages. March 2004.

Jon Nevill and Ngaire Phillips
Editors for the Australian Society for Limnology
Representative Freshwater Reserves Working Group.

REVIEW

In September 2000, the Australian Society for Limnology (ASL) established a working group to examine the issue of representative reserves (or protected areas) in inland aquatic environments. This monograph is the product of that investigation, and examines government commitments and programs in the light of information related to the use of the 'protected area' concept in inland waters. The paper examines the policy background, history, role and importance of protected areas for the conservation of inland aquatic ecosystems in Australia.

According to the international Convention on Biological Diversity 1992, the conservation of biodiversity, including aquatic biodiversity, involves the protection of representative examples of all major ecosystem types, coupled with the sympathetic management of ecosystems outside these protected areas. Although the Australian government, and all eight Australian States and Territories are committed to this principle, only Victoria, Tasmania and the Australian Capital Territory have funded specific programs aimed at meeting this commitment.

Although all jurisdictions have established terrestrial reserves (Ramsar sites, for example) which protect aquatic ecosystems, the degree to which such reserves protect representative ecosystems has not been systematically assessed in any Australian State.

The purpose of the monograph is to promote discussion of all issues surrounding the development of freshwater protected areas, including their limitations. The importance of representative protected areas provides a focus for the document. Its expected audience is primarily natural resource managers at various levels, policy makers, scientists and tertiary students. It is structured to allow the reader to find specific information on a particular issue quickly, without having to peruse the entire paper. The degree of detailed technical information provided establishes the paper as a resourcebook as well as a discussion paper.

The book comprises 10 core chapters (including a summary) making up roughly 110 pages, with a further 14 technical appendices adding another 150 pages, including endnotes. A separate bibliography is provided through an internet link. In electronic form, the book is available (free of cost) through www.onlyoneplanet.com.au. The document is due to be published in hard copy in March 2004. A direct link to the document is http://www.users.bigpond.com/jon.nevill/FW_ProtectedArea_SourceBook.doc.

The term 'reserve' is used in the book to encompass the first four of the IUCN's protected area categories. The bulk of the book's core text is devoted to chapters discussing:

- the historical development of protected areas in terrestrial and marine environments;
- threats to the freshwater environment, and the role of freshwater protected areas;
- the development of national, State and regional inventories of freshwater ecosystems to underpin the identification and selection of protected areas;
- national and State programs for the protection of aquatic environments;
- a hypothetical framework for protecting rivers of high conservation value, including a discussion of Canada's Heritage Rivers;
- difficulties faced by aquatic reserves which are not faced by terrestrial reserves; and
- conclusions and recommendations.

The book makes recommendations relating to the development of comprehensive inventories of inland aquatic ecosystems in all Australian jurisdictions, and also recommends the development of a national framework for the establishment of inland aquatic protected areas. Increased protection of high conservation value rivers is also recommended.

Appendices examine national and State freshwater conservation programs in more detail, as well as providing technical information on matters relating to international agreements, establishing site value, classification methods, the Canadian Heritage Rivers System, and extracts from key documents.

Information about the editors, Mr Jon Nevill and Dr Ngaire Phillips, may be obtained from www.onlyoneplanet.com.au. If you have any difficulties in downloading the document, please contact Jon Nevill on 0422 926 515, or through jon.nevill@bigpond.com.

Freshwater Fishes of North-eastern Australia

http://www.publish.csiro.au/nid/21/pid/3922.htm

Title	**Freshwater Fishes of North-eastern Australia**
Authors	Brad Pusey, Mark Kennard & Angela Arthington
Price	$89.00
ISBN	0 643 06966 6
Extent	400 pp.
Binding	Hardback
Pub date	July 2004
Publisher	CSIRO Publishing

DESCRIPTION

Freshwater Fishes of North-eastern Australia provides details of the ecology, systematics, biogeography and management of 79 species of native fish present in the region. It includes detailed information on their identification, evolutionary history, breeding biology, feeding ecology, movement patterns, macro-, meso- and micro-habitat use, water quality tolerances, conservation status and current threats, as well as environmental flow and management needs.

Based on the results of extensive field surveys and a comprehensive review of existing literature, it is designed to assist environmental practitioners and managers to make informed decisions about future management strategies. It will also encourage a greater research effort into the region's aquatic fauna by providing a comprehensive resource that enables other researchers to adopt a more quantitative and strategic framework for their research.

Freshwater Fishes of North-eastern Australia includes a diagnostic key to most native and alien species present in freshwaters of the region, and a bibliography of more than 1400 references spanning the late 1800s to the present.

THE AUTHORS

Brad Pusey is a Senior Research Fellow in the Centre for Riverine Landscapes at Griffith University. He undertook his Ph.D. at the University of Western Australia examining the ecology and physiology of freshwater fishes inhabiting the seasonal wetlands of the acid peat flats of south-western Western Australia before joining Prof. Arthington's group in Brisbane examining the ecology and management of Queensland's rivers.

Mark Kennard is a Senior Research Assistant and PhD candidate in the Centre for Riverine Landscapes at Griffith University. His research interests include developing a greater understanding of relationships between variation in river discharge, physical habitat and the structure and function of freshwater fish assemblages and the application of these principles to environmental flow management and biomonitoring using fish.

Angela Arthington is Professor of Freshwater Ecology in the Faculty of Environmental Sciences at Griffith University and a Program Leader in the Centre for Riverine Landscapes at Griffith. She undertook her Ph.D. at McGill University, Canada, studying entomology and ecology. Angela established the fish research group at Griffith University in 1988, and continues to work on the ecology and flow requirements of native fishes, the impacts of alien fishes and Recovery Plans for endangered species.

READERSHIP

- Fish researchers & research ecologists
- Federal & State environment managers
- World Heritage managers
- Environmental consultants
- Students
- Aquarium trade
- Hobbyists
- Recreational fishers

FORTHCOMING CONFERENCES/WORKSHOPS

OVERSEAS

2004

7th INTECOL International Wetlands Conference at Utrecht University, The Netherlands, 25 to 30 July. This Conference will be organized under the auspices of the International Association of Ecology (INTECOL). More information at http://www.bio.uu.nl/intecol/

29th International Association of Theoretical and Applied Limnology (SIL) will be held at the Helsinki University Lahti Research and Training Centre, slightly north of Helsinki on 8 to 14 August. An extensive itinerary is being organized in this limnological mecca. Website: www.palmenia.helsinki.fi/congress/SIL2004

2nd International Symposium on Riverine Landscapes, The scientific basis of restoring watercourses in landscapes, will be held from 15 to 22 August in Sweden. Experts in stream restoration science from all over the world will converge on the banks of the free-flowing Pite River to synthesize the current state of knowledge on restoring riverine ecosystems, and explore future research directions. For further information visit the website at http://www.riverine-landscapes.ch

Security and Sustainability in Water Resources is to be held from 6 to 9 September in Kathmandu, Nepal. This conference is organized by the Center for Sustainability, Environment, Equity and Partnership (SEEP); a non-profit NGO based in Kathmandu and is supported by His Majesty's Government of Nepal. See: www.seepwater.org for further information.

2nd National Conference on Coastal and Estuarine Habitat Restoration is to be held from 12 to 15 September in Seattle, Washington USA. For further information concerning the Conference or Registration, go to www.estuaries.org or email to: registration@estuaries.org

AUSTRALIAN

2004

9th Annual National Water Conference 2004, to be held at the Melbourne Convention Centre, Melbourne on 16 and 17 June. For conference updates, look up the Web site: http://www.terrapinn.com/2004/waterex_AU

Joint Estuarine and Coastal Sciences Association (ECSA) and Estuarine Research Federation (ERF) International Conference, to be held at Southern Cross University from 20 to 25 June. The Conference Theme is "Response of tropical, temperate and polar estuaries to natural and anthropogenic changes". Visit the conference website at www.scu.edu.au/ecsa37erf2004conference

13th International Soil Conservation Organization Conference (ISCO) to be held at the Brisbane Convention and Exhibition Centre from 4 to 9 July. For further details visit: www.isco2004.org

Communities Conservation & Water Use Seminar organised by the River Basin Management Society will be held in the Auditorium, CluBarham, Barham NSW from 14 to 16 July. For further information contact Jean Rau (registration) on 0427 024 620, or bobrau1@bigpond.com (program).

IWES Gold Coast 2004 will be held at Legends Hotel on Queensland's Gold Coast from 19 to 23 July. These are short courses in environmental management, air quality and wastewater treatment. Barry Hart is running a workshop on Ecological Risk Assessment. For more information visit: http://iwes.com.au/courses.html?_crs=40

5th Australian Algal Workshop will be held at Central Queensland University, Rockhampton, Queensland from 24 to 26 July. For information please contact Dr Larelle Fabbro (l.fabbro@cqu.edu.au) or phone (07) 4926 1460.

Salinity Solutions: Working with Science and Society Conference, to be held at The Capital Theatre, Bendigo from 2 to 5 August. See website for further information at www.cdesign.com.au/salinity2004

Fifth International Symposium on Large Branchiopods (ILBS5) will be held at Toodyay, near Perth, 16 to 20 August. The convenor is Dr Brenton Knott. For information see http://www.zoology.uwa.edu.au/ILBS5 and for answers to specific questions contact ILBS5@cyllene.uwa.edu.au

International Riversymposium 'Threats to Sustainable River Systems-beating the odds', to be held in Brisbane from 31 August to 3 September. For further information see: http://www.riverfestival.com.au/symposium

2004 Australian Society for Fish Biology Workshop and Conference (ASFB*2004*) will take the form of a National Symposium on Ecosystem Research and Management of Fisheries (Adelaide, from 19 to 21 September), followed by the **ASFB Annual Conference** (Glenelg, from 22 to 24 September). Contact the Symposium and Conference Secretariat for further information [carolyn.anderson@cmmg.com.au]

Woody Debris in Aquatic Ecosystems: Current Research Directions & Methods Symposium at Monash University Gippsland Campus, Churchill, Victoria on 29 and 30 September. Please contact Rebecca Lester, Conference Convener, for further information on 03 9902 6410 or rebecca.lester@sci.monash.edu.au

THE WETLANDS CENTRE SERIES: Innovations, Obligations and Incentives to be held on 21 September at the Wetlands Centre Australia. For further information contact Kylie Yeend on (02) 49516466, email ramsar@wetlands.org.au, or go to The Wetlands Centre's website using the link: http://www.wetlands.org.au/forum.htm

4th International Symposium on Extant and Fossil Charophytes, to be held at Robertson (NSW) from 25 to 27 September. Check the Symposium website at: www.uow.edu.au/science/geosciences/conferences/irgc04

Freshwater Protected Areas: new and existing tools for conserving freshwater ecosystems, organised by the Inland Rivers Network and World Wide Fund for Nature - Australia to be held 27 and 28 September in Sydney. For more information, please contact Brendan Fletcher, Coordinator Inland Rivers Network, phone (02) 9212 5112 or email: coordinator@irnnsw.org.au

Water Efficiency 2004 - Regulation and Best Practice will be held on 20 and 21 October (during National Water Week) in Sydney. The aim of Water Efficiency 2004 is to achieve a common understanding on the best way forward for a national approach to regulations for improving water efficiency and developing some permanent controls over the use of water. Visit http://www.awa.asn.au/events/efficiency04/ for more information.

4th Australian Stream Management Conference 'Linking Rivers to Landscapes' to be held at the Country Club Resort, Prospect Vale, Launceston from 20 to 22 October. For further information contact Conference Design Pty Ltd phone (03) 6224 3773 or Email: mail@cdesign.com.au

1st National Salinity Engineering Conference to be 9 to 12 November at Burswood International Resort, Perth, WA. This will be the first national conference specifically convened to focus on engineering solutions to both dryland and irrigation induced salinity. Further information visit: http://www.congresswest.com.au/salinity2004/

43rd Annual ASL Congress to be held at the University of Adelaide from 29 November to 3 December. Check out the web: http://www.asl.org.au/

2005

9th Conference International Society for Salt Lake Research (ISSLR), to be held at Curtin University of Technology, WA from 26 to 30 September. Further information from j.john@curtin.edu.au

ASL VOLUNTEERS

The following members have volunteered to speak as experts on behalf of the ASL.

If you wish to be included on the list or amend your contact details, please contact:

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ASL MEMBERSHIP FORM

Fill out the form below and send onto the Treasurer/Membership Officer (address below), or alternatively go to the ASL website (http://www.asl.org.au/asl_member.htm), follow the link to 'Membership application via the web'. Fill in the details on the form, including credit card details, and submit. ASL is not registered for GST, therefore ASL does not charge GST.

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[1] Rich Text Format (.rtf) is a format that can be opened in any word processor, although slight variations in layout may occur in different programs.

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